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## **APPENDICES**

**Appendix A: Customers, Access Lines and Revenues of Telecommunications Services Providers**

**Appendix B: Long Distance Reseller Revenues**

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## **I. EXECUTIVE SUMMARY**

The passage of Public Chapter 408 by the Ninety-Ninth (99th) General Assembly in 1995 fundamentally changed telecommunications public policy in Tennessee. The General Assembly declared “that the policy of this State is to foster the development of an efficient, technologically advanced, statewide system of telecommunications services by permitting competition in all telecommunications services markets, and by permitting alternative forms of regulation for telecommunications services and telecommunications services providers.” (T.C.A. § 65-4-123) This legislation also directs the Tennessee Regulatory Authority (“Authority” or “TRA”) to file a report every two (2) years regarding the status of telecommunications competition in Tennessee. (T.C.A. § 65-5-211)

This report addresses the following nine (9) areas:

1. The compliance of market participants with the provisions of the Acts 1995, ch. 408;
2. The status of universal service in Tennessee;
3. The availability of service capabilities and service offerings subdivided by facilities based and non-facilities based for each telecommunications services provider;
4. The number of customers, access lines served, and revenues for telecommunications service providers - subdivided by residential and business for each telecommunications services providers;
5. The impact of federal telecommunications initiatives; Act, FCC Orders - Access vs. implementation of Act;
6. The degree of technological change in the marketplace;
7. The technical compatibility between providers;
8. The service performance of providers;
9. The other information the Authority considers necessary for proper oversight and evaluation.

Additionally, the report discusses the progress in implementing the Small and Minority-Owned Telecommunications Business Plans under T.C.A. § 65-5-212 and the Assistance Program for Small and Minority-Owned Telecommunications Businesses T.C.A. § 65-5-213. The report also includes a chronology of important milestones achieved by the TRA on its road toward implementing Public Chapter 408 (hereafter referred as the “Tennessee Telecommunications Act of 1995” or the “Act”).

Since passage of the Tennessee Telecommunications Act of 1995, the TRA has certified twenty (20) Competing Local Exchange Carriers ("CLEC") as facilities based service providers. Of these twenty companies, only NEXTLINK, Time Warner and MCI Metro have actually begun providing local service in Tennessee. Additionally, we have determined that the three (3) operational CLECs are currently targeting business customers in Nashville and Memphis. Our best estimate of the actual number of businesses served by these companies amounted to fewer than 100 customers at the end of 1996. Consequently, few Tennesseans have had the opportunity to select a competing telephone company for local service in the two (2) years since passage of the Tennessee Telecommunications Act of 1995.

*...only three [new competing telephone companies] have actually begun providing local service in Tennessee... Our best estimate of the actual number of businesses served by these companies amounted to fewer than 100 customers at the end of 1996.*

One bright spot regarding local telephone competition is the amount of new capital investment made by CLECs in Tennessee. For example, six (6) CLECs have reported that they have invested approximately \$56,470,000 in Tennessee to either provide or prepare to offer local telephone service in Tennessee since passage of the Act. We expect the level of new investment by CLECs to grow more rapidly in the years ahead. A complete listing of authorized CLECs is included later in the report.

*...six CLECs have reported that they have invested approximately \$56,470,000 in Tennessee to either provide or prepare to offer local telephone service in Tennessee since passage of the Act.*

One of the first major steps toward implementing local telephone competition is to ensure interconnection between existing and competing telephone companies. Interconnection refers to the connecting arrangements between telephone companies which enables customers from one telephone company to communicate with customers from another telephone company. Part of this interconnection issue deals with the price a competitor must pay for access to the incumbent telephone company network. Both the technical and pricing aspects of this issue are determined through negotiations between CLECs and the incumbent local exchange carrier ("ILEC").<sup>1</sup> If the negotiations process breaks down, the Authority is required to act as an arbitrator, under Federal law, in order to settle unresolved issues. The Authority spent four and one-half months resolved thirty-seven (37) such interconnection issues between BellSouth and three (3) CLECs during 1996. Tennessee was one of the first states to arbitrate interconnection disputes between an ILEC and CLECs. This distinction may indicate that CLECs see Tennessee as one of the early battlegrounds in the Southeast for local telephone competition. A major role of

<sup>1</sup> Incumbent local exchange carriers ("ILECs") refer to existing telephone companies such as BellSouth and United Telephone Southeast. Competing local exchange carriers ("CLECs") refer to new telephone companies allowed to compete against ILECs pursuant to the passage of Public Chapter 408 of the Acts of 1995.

the TRA under emerging local telephone competition will be to act as a referee in settling disputes between telephone companies.

***A major role of the TRA under emerging competition will be to act as a referee in settling intercompany disputes.***

The presence of interconnection agreements between ILECs and CLECs indicates that companies plan to offer competing telecommunications services in Tennessee sometime in the future. As of May 1, 1997, the Authority has approved nine (9) interconnection agreements between CLECs and BellSouth Telecommunications, Inc.

A significant provision of the Telecommunications Act of 1995 deals with the manner in which ILECs are regulated. The traditional method of regulation was based upon the rate of return, or the level of profit, that ILECs could earn on their investment. T.C.A. § 65-5-209 allows ILECs the opportunity to elect another form of regulation referred to as price regulation. This method of regulation focuses upon the prices charged for services by the ILECs. The Authority has received requests from BellSouth Telecommunications, Inc., ("BellSouth") United Telephone Southeast, Inc. and Citizens Telecom ("Citizens") to go under price regulation. As required by the Act, the PSC conducted audits of these companies to ensure that their earnings were just and reasonable before they were allowed into price regulation. Only BellSouth was found to have excessive earnings. In order to reduce BellSouth's earnings, the PSC ordered BellSouth to cut its rates by \$56 million on January 23, 1996. Before the rate cuts went into effect, BellSouth appealed the decision to the Tennessee Court of Appeals, Middle Section, which stayed the PSC's order in February 1996. To date, no decision has been rendered on this issue by the court.

One area where competition is continuing to grow is in the long distance market. Resale offers competitors the ability to enter the market and establish goodwill and name recognition without incurring a heavy investment of capital to build network facilities. Under resale agreements, companies purchase the services of facility based telephone companies and resell the services to the public. There are currently approximately 250 resellers of long distance service operating in Tennessee. Resale also offers opportunity for companies wanted to provide local telephone service. Thirteen (13) companies have been certified by the Authority to resale local service. Similar to the long distance market, we believe resale is the most likely vehicle by which local competition will initially emerge in Tennessee. Following the guidelines established by the Federal Communications Commission ("FCC"), the Authority has set the wholesale discount at which BellSouth and United Telephone Southeast must offer their network services for resale at 16 percent and 12.7 percent, respectively.

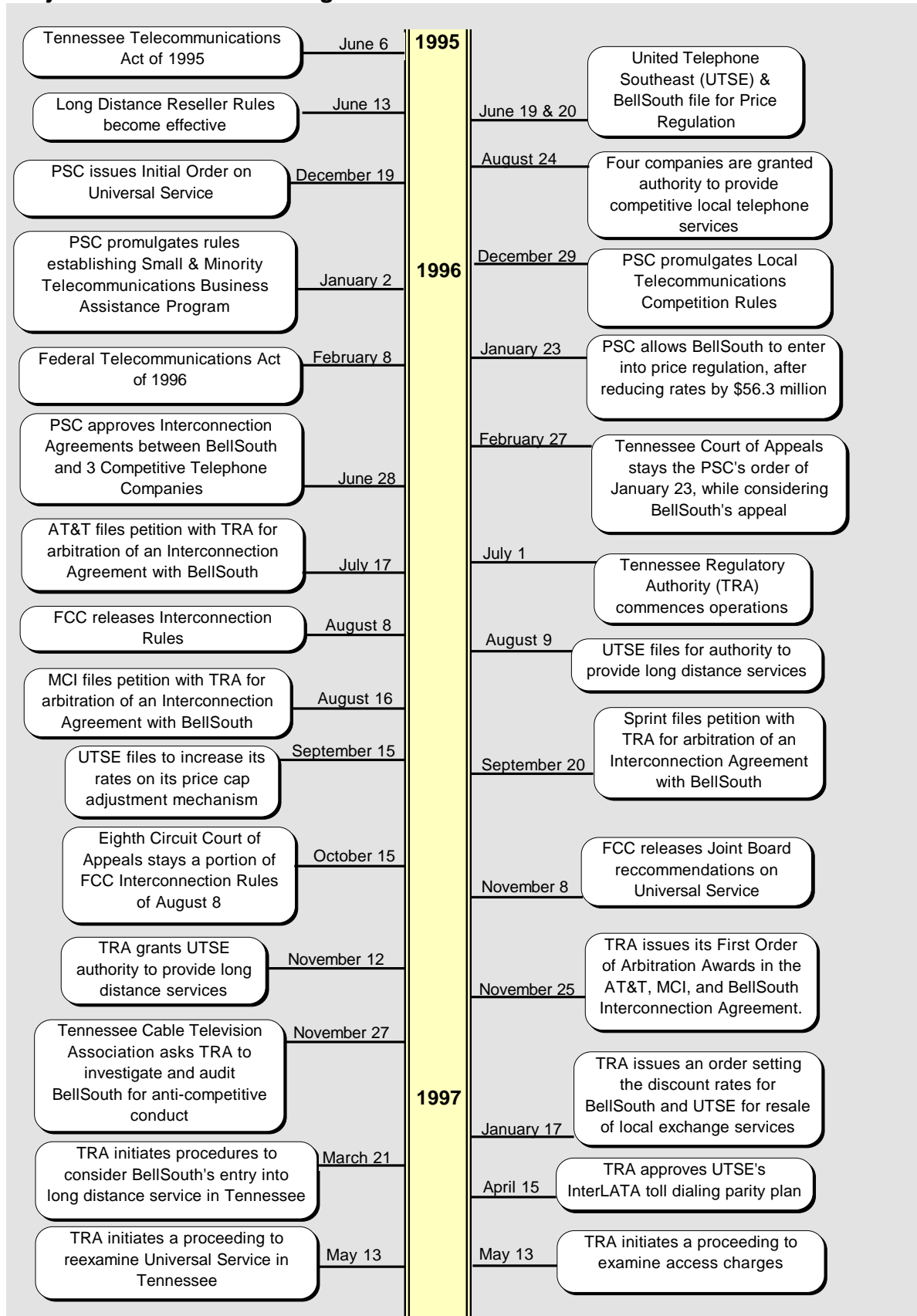
***...resale is the most likely vehicle from which local competition will initially emerge in Tennessee.***

The insignificant level of competition in the local telephone market has not had a negative effect on the revenues of ILECs in Tennessee. Despite the entry of a handful of competitors, revenues for ILECs have increased from 1995 to 1996 by \$100,484,150. Many factors contributed to this growth in revenues. The number of ILEC customers grew by 51,846 during this time. Another factor is the status of the Tennessee economy. A robust economy generates an increased demand for telephone service. The business practices of the incumbent carriers also plays a role. Has the threat of competition caused these companies to tighten their belts and lower their costs of doing business? If so, what role does Price Regulation play in this equation? Although reporting on these items is not required, the Authority will monitor each of these factors as a part of its ongoing duty to ensure that the telecommunications service industry evolves into a more competitive industry in Tennessee.

*The insignificant level of competition in the local telephone market has not had a negative effect on the revenues of ILECs in Tennessee.*

It has taken decades for the present monopoly market structure in the local telephone market to develop. Competition will come to this market but the pace of change will likely be deliberate. The legal barriers to local telephone competition have been removed by the passage of the State and Federal Telecommunications Acts. The TRA continues to implement these statutes and respond to problems that may impede competition. Much work has been done over the past two years in establishing the groundwork and rules necessary for competition to emerge in Tennessee. Listed below is a summary of some of the major events that have occurred since the passage of the Tennessee Telecommunications Act of 1995. However, much work remains to ensure that all Tennesseans benefit from increased competition in all aspects of telephone service.

## II. Major Events Since Passage of Tennessee Telecommunications Act of 1995



### **III. THE COMPLIANCE OF MARKET PARTICIPANTS WITH THE PROVISIONS OF THE ACT**

#### **Introduction**

1995 was a watershed year in Tennessee in the area of telecommunications policy. During 1995, the Tennessee General Assembly passed landmark legislation which redefined state telecommunications policy for the first time in 72 years. The Tennessee Telecommunications Act of 1995 removed the legal barriers to competition in the local telephone market and allowed ILECs the opportunity to change their method of regulation. Price regulation is different than the traditional rate of return regulation in that it changed the focus of regulation away from regulating the level of profit toward the regulation of a utility's prices. Although generally relaxing regulatory oversight, the Act also imposed new restrictions on the actions of Telecommunications Service Providers in Tennessee which were appropriate to a competitive environment the Act sought to create. This segment will review six (6) specific sections of the Tennessee Telecommunications Act of 1995.

#### **Section 7: Certification of Telecommunications Service Providers** **(T.C.A. § 65-4-201)**

This section outlines the process by which new competing telecommunications companies obtain authority to provide local telecommunications services. Specifically, T.C.A. § 65-4-201 prohibits any entity or individual, unless exempted by state or federal law, from providing any telecommunications service without first obtaining a certificate of convenience and necessity ("CCN") from the TRA. Under this section, the TRA is obligated to grant a CCN to a CLEC that it finds, after hearing, will adhere to all applicable policies, rules and orders; has the management, financial and technical ability to provide service; and submits an acceptable minority-owned telecommunications business participation plan. The TRA holds a hearing on each petition and renders a decision, as specified by the Act, within sixty (60) days.

To date the TRA has certified twenty (20) CLECs, with one (1) application pending. Two (2) applications were denied due to the failure of the applicants to comply with the requirements of Tennessee law. Below is a list of the authorized competing local telecommunications providers as of May 15, 1997, along with the date each company received certification.

- |                          |         |
|--------------------------|---------|
| 1. Hyperion of Tennessee | 8/24/95 |
| 2. IGC Telecom Group Inc | 8/24/95 |



3. Metropolitan Fiber Tennessee	8/24/95
4. Time Warner Communications	8/24/95
5. ATS of Tennessee	9/07/95
6. Brooks Fiber Communications of Tennessee, Inc.	9/07/95
7. NEXTLINK of Tennessee	9/29/95
8. American Communications Services, Inc.	
10/11/95	
9. AT&T Communications of the South Central States	10/13/95
10. MCI Metro	11/20/95
11. Southeast Telephone	12/22/95
12. Winstar Wireless of Tennessee	12/22/95
13. LCI International Telecom	5/30/96
14. LDDS Worldcom	5/30/96
15. Citizens Telecom	6/27/96
16. Comm. Depot, Inc.	6/28/96
17. Intermedia Communications, Inc.	9/17/96
18. Sprint Communications	10/03/96
19. DeltaCom, Inc.	1/02/97
20. GTE Long Distance	4/08/97

Even though twenty (20) companies have been granted authority to provide competitive local telephone service in Tennessee only nine (9) have approved interconnection agreements. And of the nine approved interconnection agreements only NEXTLINK, MCI Metro and Time Warner have actually begun providing service in Tennessee. And as stated earlier, these three companies are providing local telephone service to fewer than 100 customers at the end of 1996. Other companies have indicated to the TRA that they plan to begin providing local service in Tennessee sometime in early 1998.

#### **Section 8: Local Competition Rules Implementing the Act (T.C.A. § 65-4-124)**

The Act required the PSC to issue administrative rules or orders necessary to implement the Act. These rules are required to ensure that, “[A]ll telecommunications service providers shall provide non-discriminatory interconnection to their public networks under reasonable terms and conditions; and all telecommunications services providers shall, to the extent that it is technically and financially feasible, be provided desired features, functions and services promptly, and on an unbundled and non-discriminatory basis from all other telecommunications services providers.” T.C.A. § 65-4-124(a). This section also required the rules to provide for terms for local telephone service resale. The Act required that these rules, at a minimum, be promulgated prior to January 1, 1996. The PSC complied with this requirement and promulgated its local competition rules on December 29, 1995. On February 8, 1996, the Federal Telecommunications Act of 1996 (Federal Act) became law. On May 17, 1996, the PSC issued a revised version of its rules to comply with the Federal Act. The Attorney

General approved this version of the rules in early 1997 and returned them to the TRA, where further action is pending.

Nine (9) interconnection arrangements between BellSouth and competing providers have been approved to date by the PSC/TRA under the provisions of the state and federal Acts. Local telecommunications competition will be enhanced by the execution of fair and reasonable interconnection contracts between all telecommunications providers.

### **Section 9: Competitive Rules (T.C.A. § 65-5-208)**

This section outlines certain anti-competitive behaviors by telecommunications providers that are prohibited by the Act. Specifically, the following actions are not allowed: 1) pricing services below a minimum price floor by ILECs; 2) Cross-subsidization, preferential treatment of affiliates, predatory pricing, price squeezing, price discrimination and other anti-competitive practices are prohibited. These guidelines are designed to prevent incumbent local exchange telephone companies from using their market power to harm competition.

The TRA has resolved one (1) complaint of price discrimination involving United Telephone - Southeast, Inc., by approving new tariffs that remedied the complaint. One other complaint has been filed against BellSouth alleging cross-subsidization. On November 27, 1996, the Tennessee Cable Telecommunications Association ("TCTA") filed a complaint with the TRA alleging that BellSouth is using its regulated revenues to support its venture into cable television. A similar complaint was filed by the TCTA with the Federal Communications Commission.

### **Section 10: Price Regulation Plan (T.C.A. § 65-5-209)**

This section permits ILECs the opportunity to elect price regulation. Price regulation allows ILECs some pricing flexibility as long as the price increases do not exceed the formula prescribed in T.C.A. § 65-5-209(e). In any case, basic telephone service rates may not be increased for four (4) years under price regulation as prescribed by the Act. The TRA is obligated to approve an application for price regulation after it finds, or sets, affordable rates charged by the company on the effective date of price regulation.

The PSC approved the request of United Telephone Southeast, BellSouth, and Citizens Telephone Company of Tennessee to enter price regulation. To date, no other companies have applied for price regulation. The PSC found that United's and Citizens' rates were affordable without further adjustment. However, BellSouth was ordered to reduce rates annually by \$56.3 million before entering price regulation. BellSouth appealed this decision to the Tennessee Court of Appeals, Middle Section. The Court of

Appeals stayed the PSC order on February 27, 1996, and this matter is currently pending before the Court.

The Act allows companies under price regulation to adjust rates annually. United filed its first annual adjustment of its rates under price regulation in September 1996. One of the price changes proposed by United Telephone - Southeast is to begin charging for directory assistance. The Consumer Advocate Division of the Attorney General's Office claim that this proposed rate increase violates the prohibition on increasing Basic Local Telephone Service rates and other provisions of this section. This matter is pending before the TRA at this time.

BellSouth filed a proposed tariff on August 28, 1996 seeking to limit the number of residential telephone lines to ten (10) at any location. The Consumer Advocate Division of the Attorney General's Office intervened in this tariff and has claimed that BellSouth's proposed tariff violates this section or section 9 of the Act. This matter is also pending before the TRA.

#### **Section 16: Small and Minority-Owned Telecommunication Business Participation Plan (T.C.A. § 65-5-212)**

All Telecommunications Service Providers are required to file and update annually a plan to purchase goods and services and provide information on programs that offer technical assistance to small and minority-owned telecommunications businesses. Also, all new CLECs have to provide these plans as a condition for certification by the TRA. The Authority is in the process of requesting the annual updates from the Telecommunications Service Providers. Additional discussion on the Small and Minority-Owned Telecommunication Business Participation Plan is found later in the report.

#### **Section 17: Assistance Program for Small and Minority-Owned Telecommunications Businesses (T.C.A. § 65-5-213)**

Under this section, the Department of Economic and Community Development ("ECD"), with assistance from the Comptroller of the Treasury ("Comptroller"), is required to develop an assistance program for small and minority-owned telecommunications businesses. These agencies were required to promulgate an administrative rule implementing this provision no later than January 1, 1996. This section also requires the TRA to determine the annual contribution to be made by each Telecommunications Service Provider in order to collect \$2.0 million per year for five (5) years to fund this program. ECD was required to make an interim report on the development of this program to the appropriate House and Senate Committees by September 1, 1995.

ECD delivered its interim report to the appropriate committees on September 1, 1995, and subsequently promulgated its Proposed New Rule Chapter, Small and Minority

Telecommunications Business Assistance Program. This rule chapter has been approved by the Attorney General and is under review by the Government Operations Committee of the General Assembly.

The PSC promulgated its New Rule Chapter 1220-4-9, Rules for Collecting Contributions for the Small and Minority Telecommunications Business Assistance Program, on January 2, 1996. These rules became effective on January 28, 1997, after the review and approval by the Attorney General and the Government Operations Committee of the General Assembly. The contributions to fund the program are expected to arrive in June 1997. Additional discussion on the Small and Minority Telecommunication Business Assistance Program is also found later in the report.

#### **IV. STATUS OF UNIVERSAL TELEPHONE SERVICE IN TENNESSEE**

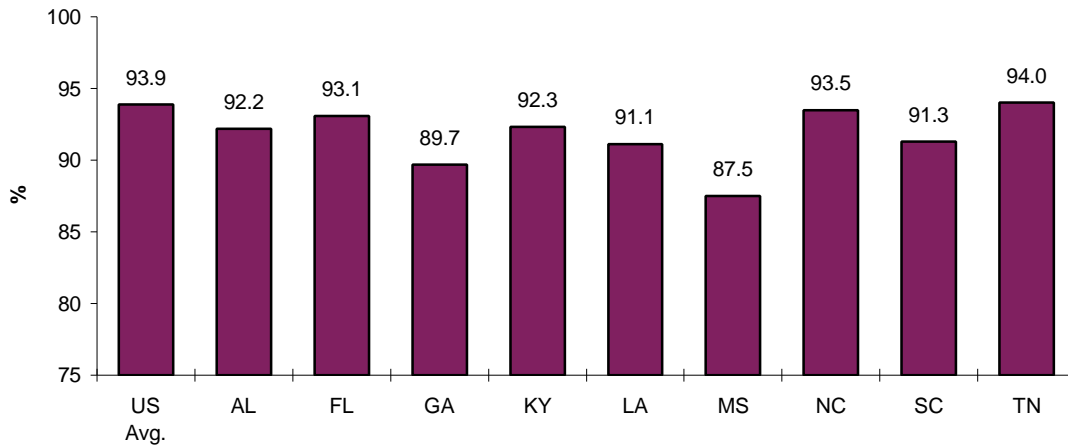
##### **Introduction**

One of the major U.S. public policy goals for telecommunications during the last 62 years was to make telephone service available to all citizens at reasonable prices. This goal is sometimes referred to as "universal service." Telephone service is seen as having important social, economic and national security implications and as such should be available to all citizens. This policy goal was first enunciated in the Federal Communications Act of 1934.

Most countries turned this important function -- the operation of telephone companies -- over to the public sector. The U.S. followed a different path and allowed the private sector to own and operate the telecommunications network under the regulatory eye of federal and state utility commissions. Working together, the private and public sectors have made great progress toward achieving universal telephone service in the U.S. In 1996, the Federal Communications Commission reported that 93.9 percent of U.S. households had telephone service. Tennessee exceeded the 1996 national average by achieving a 94 percent telephone penetration rate. Tennessee's penetration rate also led all BellSouth states during 1996. Below is a graph showing Tennessee's ranking with other BellSouth states and the U.S. average in this important statistic.

***Tennessee exceeded the 1996 national average by achieving a 94 percent telephone penetration rate.***

### **1996 Household Penetration of Telephone Service in the Southeastern States\***



\*Source: Federal Communications Commission

### **Lifeline and Link-up Telephone Assistance Programs**

As we enter 1997, according to the FCC, Tennessee has come closer to achieving universal service than our neighboring states. Two specific programs which have helped Tennessee achieve universal service are Lifeline and Link-up. These programs are designed to assist economically disadvantaged Tennesseans in affording basic telephone service. Participants in these programs are means tested in order to ensure that only eligible Tennesseans receive the benefits. Lifeline provides a monthly discount on the cost of basic telephone service, while Link-up provides a discount on the installation charge for telephone service. A total of 4,356 Tennesseans took advantage of Link-up during 1995. The number of participants in the Lifeline program is also impressive. A total of 20,696 and 18,908 Tennessee households utilized Lifeline during 1995 and 1996, respectively.

### **Universal Service and the Tennessee Telecommunications Act of 1995**

In the pursuit of the goal of universal service, federal and state regulatory agencies have established pricing strategies to support affordable rates for residential telephone service. These rates were not necessarily based strictly upon the cost of a particular service but set in order to achieve universal service. Prices for telephone service were also deaveraged across the country in order to ensure that rural consumers had access to affordable service. This pricing philosophy led to the establishing of different prices for telephone services for geographic regions based upon the value of service. Value of service in Tennessee and most other states depends on the number of

telephone subscribers a consumer can call without paying long distance charges. The larger the toll-free calling area the more valuable and more expensive the service. For example, the local telephone residential rate for Lynchburg, Tennessee is \$7.55 per month while the residential rate in Memphis is \$12.15.

The Tennessee General Assembly recognized the importance of maintaining universal service when it enacted the Tennessee Telecommunications Act of 1995. This statute requires all competing telecommunications providers to offer Lifeline and Link-up services and puts a four (4) year freeze on basic telephone rates for telephone companies electing to go to price regulation. However, the legislature also realized that the way universal service was funded under a monopoly market structure would likely have to be modified under a competitive market structure. T.C.A. § 65-5-207 charged the PSC with the responsibility to assess universal service and establish policies and promulgate rules which would ensure that telephone service remains affordable. The statute directed the PSC to initiate a contested case by July 6, 1995, in order to evaluate the universal service support mechanism and create an alternative support mechanism, if needed.

On June 29, 1995, the PSC complied with this statutory requirement and opened a docket to evaluate universal service. The PSC issued its initial decision on this matter on December 19, 1995, finding that no alternative universal service funding mechanism was needed at that time due to the lack of competition. The Authority has continued to monitor universal service and has determined that another review is needed. On May 13, 1997, the Authority initiated a docket in order to review this important issue.

Another important implication on this issue for Tennessee is federal government action. On May 7, 1997, the FCC issued its Order on Universal Telephone Service in the U.S. This one thousand (1,000) page order is being reviewed by the Authority to determine its implications for Tennessee.

### **Conclusion**

Previous policies have helped ensure that telephone service is within the economic reach of all Tennesseans. Initial findings indicate that the present universal service funding mechanism is adequate to ensure that telephone rates remain affordable. At the present time, the minimal competitive threats to ILECs have not threatened the existing universal service funding mechanism in Tennessee. As Tennessee begins to see competition emerge in the local telephone market, the Authority may have to establish new funding mechanisms in order to ensure that telephone service remains within the reach of all citizens. Tennessee can ill afford to become a state of telecommunication haves and have nots. Telecommunications policy will need to

***...as Tennessee begins to see competition emerge in the local telephone market, the Authority may have to establish new funding mechanisms in order to ensure that telephone service remains within the reach of all citizens.***

be dynamic in order to continue to meet the telecommunications needs of all Tennesseans.

## V. THE AVAILABILITY OF SERVICE OFFERINGS AND SERVICE CAPABILITIES

### Introduction

This section outlines the service offerings and service capabilities of telecommunications companies in Tennessee. At the time of passage of the Tennessee Telecommunications Act of 1995, Tennessee's telecommunications network ranked among the best in the BellSouth region. This ranking is based upon the availability of advanced telecommunications services such as the statewide deployment of Integrated Services Digital Network ("ISDN") and SS-7 technology. Other states cannot make this claim.

Tennessee is well positioned to offer its citizens a fast lane onto the information superhighway. The Tennessee General Assembly sought to maintain this competitive edge by instructing the Tennessee Regulatory Authority to monitor the availability of service offerings and service capabilities of the telecommunications network as we evolve from a monopoly to a competitive market structure.

*Tennessee is well positioned to offer its citizens a fast lane onto the information superhighway.*

The first part of this section outlines the service offerings of various aspects of telephone service in Tennessee. This first part will include discussion on service offerings in the local exchange telephone market and the long distance telephone market. Based upon our analysis, the current level of competition in the local telephone market does not appear to be stimulating new service offerings by either the CLECs or the ILECs. We expect that this lack of new telecommunications service offerings will change when additional competition begins to emerge.

Based up our analysis, the current level of competition in the local telephone market does not appear to be stimulating new service offerings by either the CLECs or the ILECs.

The second part of this section addresses the service capabilities of the telecommunications network in Tennessee. One early observation regarding this topic can be made at this time. Local telephone competition has not improved the service capabilities of Tennessee's telecommunications network nor has it caused the incumbent telephone companies to dramatically increase their capital expenditures on network

elements. However, we can say, based upon our analysis, that Tennessee is not losing ground to other states on network capabilities. For example, few states can claim the level of advanced network deployment that Tennessee can. Such services as Caller I.D. and ISDN are available to most Tennesseans.

### **Service Offerings**

The service offerings of the Incumbent Local Exchange Telephone Companies are described in tariffs of more than 1,000 pages for each company. The Authority reviews each tariff in order to ensure it is non-discriminatory and complies with previous Authority policies and state law. The tariffs are public documents available for inspection in the Authority's offices. The trend in the number of telecommunications tariffs filed with the PSC/TRA since 1994 is flat. Specifically, 318 telecommunications tariffs were filed with the PSC in 1994, compared to 316 for 1995, and 302 for 1996. In general, telecommunications tariffs can be categorized into the following groups:

- Network Access Services
- Business Services
- Residence Services
- Optional Calling Plans
- Coin Telephone Services
- Operator Services
- Directory Assistance
- Regional Long Distance (IntraLATA) Services
- Special Transport Services (A variety of voice, data and video services)

### ***Local Telephone Service***

Only two competing local telephone companies, NEXTLINK and Time Warner, had switching facilities and actually reported local telephone service revenues during 1996. The combined local telephone service revenues of these two (2) CLECs only amounted to \$66,000 during 1996. A review of these companies' tariffs, however, does not reveal any unique or innovative telecommunications services. NEXTLINK does offer its customers various bundles of services at rates below those charged by BellSouth for comparable packages. For example, for an additional monthly charge of \$5.00, NEXTLINK business customers can obtain a package of features including several Call Forwarding variations, Conference Calling, Call Transfer, Call Waiting, Message Waiting, Speed Dial (eight numbers), Three-Way Calling, Automatic Call Return, and Call Pick Up. In contrast, BellSouth charges businesses \$18.60 for these features, with the exception of Call Transfer and Conference Calling which BellSouth does not offer to businesses.<sup>2/</sup> It appears that NEXTLINK's competitive strategy is to target business

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<sup>2/</sup> NEXTLINK also prices a number of business services lower than BellSouth. NEXTLINK's Caller ID - Name and Number is priced at \$9.00 per month compared to BellSouth's \$9.99. NEXTLINK charges \$15.00 monthly for hunting arrangements and \$52.00 monthly for a PBX trunk, while BellSouth charges



customers in Nashville and Memphis with unique packaging of existing services at lower prices than BellSouth offers rather than bringing to the market place new and innovative services.

BellSouth's only evident response to actual or potential competition is to offer its business customers Contract Service Arrangements ("CSAs"). These CSAs give a business customer discounts from the tariffed prices for service packages, while imposing volume, usage, or revenue requirements in order for that customer to qualify for the discount rate. Typically, the customer is required to sign a contract with BellSouth for a specific term (years) in order to qualify for the discount. BellSouth has filed over 60 of these arrangements with the TRA thus far in 1997 compared to none in 1995 and only 13 in 1996. The threat of competition appears to be motivating BellSouth to offer more long term contract service arrangements with their large customers.

### ***Long Distance Service***

Long distance service is provided by two categories of companies: facility based carriers and long distance resellers. Today, there are fewer than six (6) facility based long distance carriers in Tennessee while the number of long distance resellers has mushroomed to approximately 250. AT&T and MCI are the two largest facility based long distance carriers in Tennessee while LCI International Telecom and Excel Telecommunications are the largest resale long distance companies.

Facility based long distance carriers, such as AT&T, MCI and Sprint, operate under both federal and state laws and rules. Access to their traditional long distance service offerings is normally provided by local telephone company networks. In recent years a new group of providers has emerged called Competitive Access Providers or CAPs, which provide alternate networks for connecting businesses to long distance companies. Since these CAPs did not initially offer local services, they operate under the jurisdiction of the Federal Communications Commission. When they elect to enter the local telephone market (and some have), the CAPs become subject to state laws and regulation.

In addition to traditional long distance telephone service and a variety of access options, long distance companies also offer optional calling plans, operator services including Directory Assistance, and an array of high capacity transport services suitable for voice, data or video. Many of these high capacity services have significant volume discounts which make them attractive to resellers. For example, a facility-based carrier will give a discount off its regular price if a reseller agrees to purchase one (1) million minutes of access for a particular period of time.

While long distance resellers make up the majority of the number of long distance service providers they only account for approximately 10 percent of long distance

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\$20.29 to 29.78 for hunting and \$47.34 to \$69.48 for PBX trunks. NEXTLINK includes touch-tone in its monthly basic business service rate, while BellSouth charges \$3.00 per month extra.

revenues in Tennessee. However, long distance resale has allowed new companies the opportunity to enter the market and establish name recognition. LDDS is a perfect example of how a new company entered the long distance market as a reseller and is today the fourth largest long distance company in the U.S. LDDS is also evolving from a pure reseller into a facility based long distance carrier. We expect the local telephone market to evolve in a similar manner.

Resale is an important ingredient to the success of local competition in Tennessee. The Tennessee Telecommunications Act of 1995 directed the TRA to adopt rules which require telecommunications services providers to resell their networks. T.C.A. § 65-4-124. On January 17, 1997, the Authority set the wholesale discount rate on local telephone service offered by BellSouth and United Telephone Southeast to their competitors. This discount reflects the elimination of costs that BellSouth and United Telephone Southeast avoid when they resell their network on a wholesale basis. The discount was set at 16 percent and 12.7 percent for BellSouth and United Telephone Southeast, respectively. Since the wholesale discount for the resale of local services was only recently set, there has been little activity in this area to date. Nevertheless, we expect that resale will be the likely vehicle for competition to initially emerge in Tennessee.

### **Service Capabilities**

Service offerings are naturally built on the service capabilities of the networks which offer them. In addition to the offerings usually associated with a single (i.e.-monopoly) network, these networks are capable of providing a variety of competitive services as well (e.g.-Voice Mail, Speed Dialing, Internet Access). Since there is at least the potential for cross-subsidization when one company can offer both non-competitive and competitive services, conditions have been placed on the incumbent telephone companies before they are allowed to offer competitive services. One of the conditions imposed by the 1996 Federal Act is that BellSouth unbundle its local networks and allow new competitors to interconnect at any technically feasible point prior to BellSouth offering long distance services in its region. The arbitration proceedings conducted by the TRA during 1996 and 1997 defined an array of unbundled network elements which BellSouth must provide to new local telephone service entrants. These network elements can be connected to the facilities of the new entrant in any way desired to bring new service offerings to the market.

With respect to new facilities based providers of local telephone service in Tennessee, three have installed their own switching equipment (NEXTLINK, MCI, and Time Warner). Another (US LEC -- Tennessee Certification Pending) has shared with the TRA a commitment from a switch vendor to install new switches in Nashville, Knoxville, and Memphis in early 1998 to support a service turn up in the first quarter.

NEXTLINK, MCI Metro and Time Warner are also building or leasing existing fiber optic facilities to interconnect their switches with ILECs. To date, the new

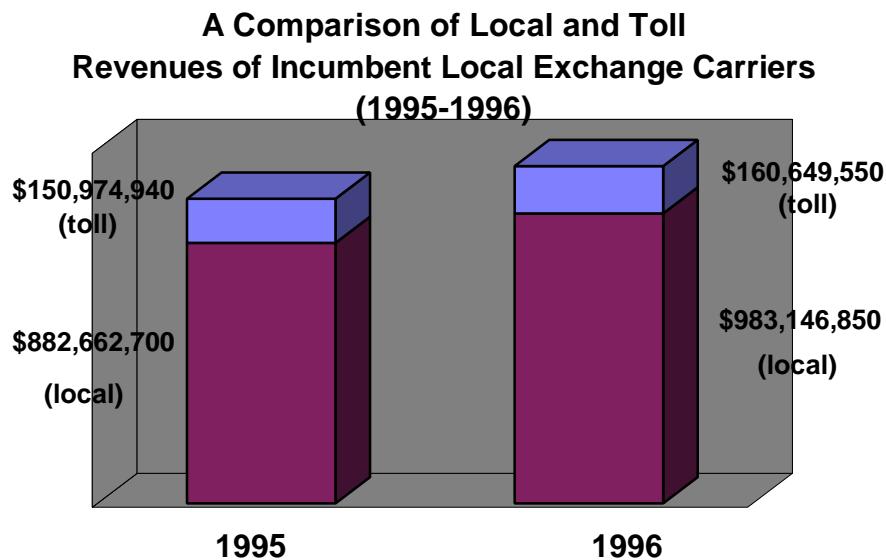
companies are using their network capabilities to offer services comparable to those already available from existing telephone companies. This strategy will allow them to establish credibility with their new customers as suppliers of reliable telephone service before moving toward innovative new service offerings. This is a critically important step, and will take some time to achieve.

## VI. CUSTOMERS, ACCESS LINES, AND REVENUES OF TELECOMMUNICATIONS SERVICES PROVIDERS

### Local Telephone Service

Local telephone competition has not materially affected the number of customers, access lines or revenues of existing telephone companies. During 1996, ILECs increased their number of subscribers by 51,846 from the previous year. ILECs also witnessed a 10.7 percent increase in telephone revenues. The primary source of income for local exchange telephone companies continues to be local service revenues. During 1996, almost 84 percent of local telephone company revenues came from local service -- business and residential -- customers. Below is an illustration of all ILEC revenues for 1995 and 1996.

*Local telephone competition has not materially affected the number of customers, access lines or revenues of ILECs.*



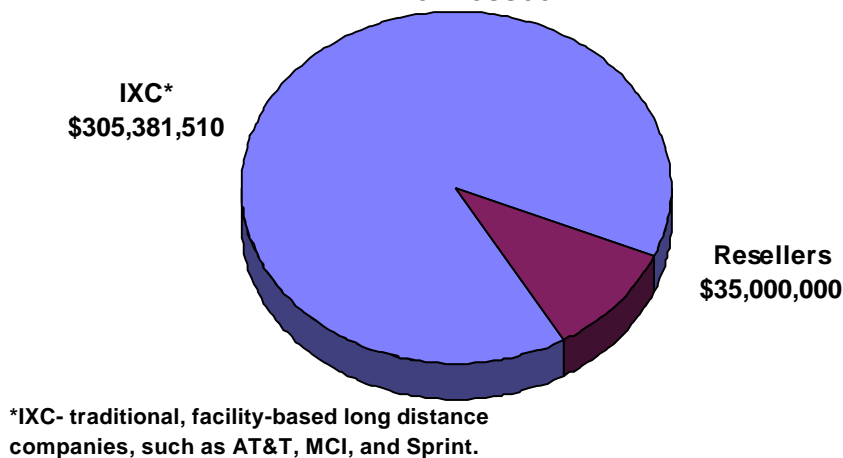
### Long Distance Telephone Service

The intrastate interexchange (interLATA long distance) carriers generated less than \$95 million in revenue from residential services and about \$210 million in revenue from business services in 1996.<sup>3</sup>

Tennessee has witnessed a dramatic increase in long distance resellers since 1990. For example, long distance resellers reported approximately \$35 million in revenue for 1996, up from \$22 million in 1995. Below is a breakdown of the portion of long distance revenues by resellers and the facility-based long distance telephone companies.

*Tennessee has witnessed a dramatic increase in long distance resellers since 1990.*

**1996 Long Distance Telephone Company Revenue for Tennessee**



### Competing Telecommunications Providers

Competing Telecommunications Service Providers reported no revenue for 1995 and only \$66,000 for 1996. At the end of 1996, less than 300 business customers were being served by competing telephone companies in Tennessee. Additional detail on this section is provided in

*Competing Telecommunication Service Providers reported no revenue for 1995 and only \$66,000 for 1996.*

<sup>3</sup> The interexchange carriers were unable to identify customers as residential or business and could, at best, only estimate their presubscribed access lines at year-end. Two of these carriers were unable to provide a breakdown of their revenues into residential and business services.

## **VII. The Impact of Federal Telecommunications Initiatives**

All three branches of the federal government were involved in fundamentally changing the course of U.S. telecommunications public policy during 1996. These changes in telecommunications public policy at the federal level place new responsibilities on the TRA. The major federal initiatives are described below.

### **Telecommunications Act of 1996**

On February 8, 1996, President Clinton signed a landmark telecommunications bill which was the first major overhaul of telecommunications law since 1934. In enacting the Telecommunications Act of 1996, Congress sought to establish a pro-competitive, de-regulatory national policy framework for the United States for the purpose of encouraging the rapid deployment of new telecommunications technologies. The Federal Act seeks to promote competition, in lieu of economic regulation, in U.S. telecommunications markets. The Act empowered the Federal Communications Commission ("FCC") to establish rules that will quickly and effectively implement the national telecommunications policy. The Federal Act also prescribed that a joint board made up of FCC Commissioners and State Regulatory Commissioners be established for the purpose of making recommendations on how to ensure that telephone service remains affordable to all U.S. citizens in a competitive market structure.

### **Federal Communications Commission Actions**

During 1996, the FCC issued several sets of administrative rules designed to implement the Federal Act. These rules primarily dealt with local competition and public payphones. The first of these rules was issued on August 8, 1996, and addressed the local competition provision of the Federal Act. These rules dealt with some of the issues which could provide roadblocks to local competition. Some of the major aspects of these rules included:

- Requiring existing telephone companies to resell their network at a specific discount to its competitors. State regulatory bodies were given the responsibility to determine the level of discount.
- Allowing a consumer to retain his telephone number when changing to a competing telephone company. This concept is referred to as number portability.
- Mandating ILECs to interconnect their network with competing telephone companies.

- Requiring ILECs to unbundle (break down to individual components) their network so competing telephone companies can purchase only the parts they need to provide telephone service.
- Outlining a process which allows BellSouth into the interLATA long distance service within its region. At the present time, for example, BellSouth cannot carry a telephone call between Nashville and Memphis. The FCC designated that State regulatory bodies would conduct an investigation and advise them whether BellSouth meets the conditions for entry prescribed by the Federal Act. The TRA has initiated a proceeding to examine whether BellSouth complies with Section 271 of the federal Act. This section outlines certain actions which BellSouth must take before it can provide interLATA toll service.

The second set of rules implementing section 276 of the Federal Act dealt with public payphones and was issued by the FCC on September 20, 1996. These rules set forth a process which is designed to help create a level playing field in the payphone industry. Some of the major components of this rule include:

- Removing the subsidies from payphone service. This provision deregulates payphones operated by telephone companies and prohibits the use of regulated revenues to support the payphones operated by telephone companies. All telephone companies were required to separate payphone operations from their regulated operations by April 15, 1997.
- Ensuring fair compensation for all calls originating from payphones. In order to accomplish this objective, the FCC ordered "dial around" compensation to payphone providers for calls from their payphones in which the caller utilizes a different long distance carrier than the one assigned to the payphone by its owner. The FCC also ordered the deregulation of the price of local calls from payphones after October 1997. This controversial provision strips state jurisdiction of price regulation on these calls and gives payphone companies freedom to charge any amount they deem appropriate for a local telephone call from a payphone. The Tennessee Regulatory Authority filed comments with the FCC opposing the removing of price controls for local calls from payphones. The FCC rejected the arguments in our petition.
- Requiring telephone companies to provide nondiscriminatory access to their services to all payphone companies. This will prevent the telephone company from providing a service to its payphone subsidiary which it will not provide to its competitors.

*This Controversial provision strips state jurisdiction of price regulation on these calls and gives payphone companies freedom to charge any amount they deem appropriate for a local telephone call from a payphone. The Tennessee Regulatory Authority filed comments with the FCC opposing the removing of price controls for local calls from payphones.*

### Court Action

The FCC Rules have been met with strong protest from various stakeholders. Some states believe that the FCC has exceeded the intent of Congress and was making decisions which were in the domain of state jurisdiction. The Tennessee Regulatory Authority was among the states which participated in the appeal of certain aspects of the local competition rule promulgated by the FCC. Many telephone companies also protested the FCC local competition rule claiming the rule had ordered discount too large with regard to the resale provision. On October 15, 1996, the Eighth Federal Circuit Court stayed implementation of certain aspects of the FCC Rule. The hearing has been held and the parties are awaiting a decision of the court.

The FCC's payphone rule also has been challenged in federal court by several state commissions and other parties. The major aspect of the states' challenges focused on the removal of price controls on local calls from payphones. States argue that this issue is a local, not federal issue and that state authorities are in the best position to determine if price controls are needed for payphones in order to prevent overcharging. No stay has been granted in any of these appeals. We anticipate the matter should be decided prior to October 1997.

### **States' Role Under the Federal Act**

- Mediate and Arbitrate, if required, interconnection disputes between existing telephone companies and competitors.
- Review interconnection agreements to ensure that they do not discriminate among carriers.
- Determine the wholesale discount rate for resale services.
- Make a recommendation to FCC regarding whether BellSouth has complied with Section 271 of the Act in order to enter the interLATA long distance market.
- Establish an intrastate universal service mechanism.
- Rule on petitions from small telephone companies to be exempt from local competition.
- Establish guidelines and a funding mechanism for public interest payphones.
- Monitor the pricing behavior for local calls from payphones. State regulatory bodies can petition the FCC for regulatory authority if prices dramatically increase.

### **Federal versus State Telecommunications Legislation: Conflict or Complementary?**

An analysis of the Tennessee Telecommunications Act of 1995 and the federal Telecommunications Act of 1996 does not reveal any major conflicts. In fact, many of the issues which the legislature addressed in the state telecommunications legislation were mirrored in the Federal Act. For example, both state and federal statutes call for the lowering of barriers to competition for local telephone service. As expected, the Federal Act is broader in scope and covers issues unique to its jurisdiction, such as when BellSouth can enter the interLATA long distance market.

*...many of the issues which the legislature addressed in the state telecommunications legislation were mirrored in the Federal Act.*

Both the federal and state legislation seek to promote the public interest by expanding competition to all aspects of the telecommunications sector. However, passage of the state Act almost seven months before the Federal Act was passed allowed Tennessee to “gear up” for competition quicker than some other states.

### **Conclusion**

The Congress has entrusted states with some major responsibilities in regard to implementing the national policy in telecommunications away from the present monopoly structure toward a more competitive marketplace. Congress and the Federal Communications Commission realized that local competition would not emerge overnight and knew that states’ regulatory agencies would be vital in working through the maze and being able to respond more quickly to the inevitable problems in the new market structure. The challenge for the states is to take steps which will facilitate local competition while not losing sight of the goal of universal service.

*The challenge for the states is to take steps which will facilitate local competition while not losing sight of the goal of universal service.*

## **VIII. TECHNOLOGICAL CHANGE IN THE MARKETPLACE**

In March of 1996, the Public Service Commission issued its final report on telecommunications in Tennessee. Among the marketplace changes driven by technology and reported on at that time were:

- The Explosion of Internet;
- The Arrival of the “All Digital” telephone network (ISDN or the Integrated Services Digital Network);



- The Expansion of Wireless Services;
- The Revision of plans to deploy all-purpose “Broadband” networks;
- The addition of telephony to cable television systems; and

The Interconnection of the networks of competing companies

In the fourteen months since that report was published, the marketplace continues to shift. A dose of reality appears to have landed on the extravagant claims of many of the major architects of the information superhighway. For years, plans to invest billions of dollars on networks that can do everything for the consumer have received wide attention. As the time arrives to begin such expenditures on new telecommunications infrastructure, a number of “green” lights have suddenly switched to yellow and red.

*As the time arrives to begin such expenditures on new telecommunications infrastructure, a number of “green” lights have suddenly switched to yellow and red.*

### **CATV Companies Revise Their Telephone Plans**

One of the major forces behind the new Tennessee law which now allows competitors to enter the local telephone business was Time Warner. Shortly after the new law was passed, Time Warner received certification from the Public Service Commission to enter the local telephone market (Hearing: June 27, 1995, Order: August 24, 1995). In July 1995, “USA Today” reported on some of the technical difficulties encountered by Time Warner and other CATV companies as they attempted to incorporate telephone service onto their CATV networks. Nevertheless, at that time, Time Warner insisted that they planned to serve both residential and business customers in Memphis with local telephone service starting in 1996. That did not happen.

In October 1996, the media reported that Time Warner’s CEO had told investors that he was “not interested” in the phone business anymore (USA Today, October 9, 1996). Time Warner was reportedly distressed at a 30 percent shortfall in the revenues it expected during 1996.

*In October 1996, the media reported that Time Warner’s CEO had told investors that he was “not interested” in the phone business anymore.*

On January 13, 1997, the Associated Press reported that Time Warner was putting on hold its efforts to expand residential phone calling through cable TV lines. They did intend to continue to serve businesses however. The report noted that the change in

strategy comes as cable operators in general appear to be scaling back ambitious expansion plans into digital cable TV, telephone and the Internet.

In a similar vein, TCI, the nation's largest cable company admitted that its plans for adding telephone and Internet capabilities were not working. Calling their plans too ambitious, over hyped and impossible to implement on schedule, TCI Chairman John Malone said that they "were just chasing too many rabbits at the same time." His new plan is to go back to a simpler life in the cable industry. "My job now is to prick the bubble. Let's get real" (Wall Street Journal, January 2, 1997).

Another contributing factor to the revised plans of the CATV industry has been the success of the direct broadcast satellite ("DBS") industry. TCI, in its third quarter report for 1996, acknowledged losing 70,000 customers and revenues of \$25 million to a combination of DBS rivals and rate increases by TCI. To keep this in perspective however, while the number of DBS customers doubled from October 1995 to October 1996, the CATV share of the non-broadcast television market declined only 2 percent (from 91 percent to 89 percent) (Wall Street Journal, January 6, 1997). The number of DBS subscribers is estimated to be approaching 5 million (Wall Street Journal, November 7, 1996).

### **Regional Bell Companies Reassess Expansion Priorities**

As the CATV industry tempers its plans to enter the telephone business, there also appears to be a cooling in the enthusiasm of the Bell Operating Companies to enter the CATV market. While the March 1996 PSC report first touched on these shifts (The Revision of Broadband Strategies), in recent months this trend has become clearer. In a report to Congress, the Chairman of the Federal Communications Commission noted that "expectations of a full-front two-wire war are not being met" (i.e. the CATV cable and the telephone wire). He went on to say that by pulling back on their plans to invade each other's turf, the cable and phone industries are approaching a form of détente. (Wall Street Journal, January 6, 1997).

Détente is a bit of an overstatement with respect to Tennessee. While BellSouth may be revising its priorities, it is not pulling out of the CATV business. In fact in October and November 1996, the Tennessee Cable Telecommunications Association ("TCTA") filed complaints with the FCC and the Authority respectively about the practices of BellSouth in entering the cable television business in Tennessee. In spite of this however, there is evidence that BellSouth has decided to delay its planned entry into CATV in Tennessee. On January 24, 1997, the *Tennessean* reported that BellSouth had postponed its CATV plans for metropolitan Nashville, Franklin, and Brentwood for much of 1997, while it concentrates on other key Southeast cable markets.

***Long Distance replaces  
CATV as BellSouth's top  
expansion priority.***

Entry into the long distance market now appears to be the top priority for BellSouth's expansion of its business.

BellSouth's entry into the long distance market in Tennessee and throughout its nine (9) state region, will be a dramatically different experience than that of new companies attempting to move into the local telephone market. BellSouth can enter its regions long distance market almost on its own. BellSouth has an existing interLATA network which it has used for years for its internal communications. This experience and its years of planning to enter this long distance market should allow rapid market entry without significant dependence on competitors. No other company attempting to enter the local market is similarly positioned. Extensive support from BellSouth in terms of interconnection and resale agreements will be essential for market entry. Under the Federal Telecommunications Act of 1996, the price for BellSouth entry into long distance is the opening of its local markets to competition. Specific conditions to be met are spelled out in the Federal Act. It will be the TRA's responsibility to certify that BellSouth has met the conditions required in the Federal Act. BellSouth expects to meet these conditions during 1997 and will then request FCC authorization for entry into its regional long distance market.

### **Wireless Communications Expand**

The provision and pricing of identical telephone services are not the only competitive factors in telecommunications. The availability of alternative and substitute goods or services can have a competitive effect on the provision and pricing of telecommunications services by companies certificated by the TRA. In general, the more alternatives that consumers have available, either substitute goods or substitute suppliers, the better are the market outcomes for consumers. One such alternative is wireless communications.

The most obvious alternative to wireline telephone services is a wireless service such as cellular telephone service. Cellular service providers operating in Tennessee generated \$402,811,000 in revenue in 1995, and \$526,896,000 in 1996, for an annual revenue increase of 31 percent. Likewise, the number of cellular customers also grew dramatically from 1995 to 1996. Tennessee cellular telephone subscribers increased from 605,000 in 1995 to 850,000 in 1996, for a healthy 41 percent growth rate. However, the rapid growth of cellular service does not appear to be negatively affecting local telephone service. Cellular telephone service appears to be a complementary not competing service to existing local exchange telephone companies. One of the reasons why cellular service may not have the present ability to exert competitive pressure on regular telephone service is its pricing method. Cellular telephone companies bill their customers on a usage basis, similar to long distance charges, while local telephone service has large flat-rate calling plans. However, competitive pressures from the wireless industry may change with the advent of Personal Communications Services.

The rollout of the next generation of cellular telephones, called Personal Communications Service or PCS, accelerated during 1996. AT&T announced in October 1996, a digital PCS which it claimed could be purchased immediately in 40 major U.S. markets with a population of 70 million people (Wall Street Journal, October 3, 1996). AT&T acquired a PCS license for Memphis in August 1996 in a swap of franchises with SBC Communications who had originally acquired the license during the FCC bidding process (Telephony, August 19, 1996). AT&T already possessed PCS licenses for the Nashville and Knoxville markets. The AT&T system combines phone, data and paging functions in one simple handset. AT&T expects to complete construction of its digital cellular network during 1997. The service can use either the regular cellular frequency, or the higher PCS frequency depending on which market the caller is in. The phone will operate in a "dual-mode" and simply switch between the two frequencies without the user knowing. Other PCS companies licensed to operate in Tennessee include Powertel PCS Partners (Memphis/Jackson) Wireless Co. (owned by Sprint, TCI, Cox and Comcast) in the Nashville market, and BellSouth (Knoxville).

The move to wireless digital communications does not come without problems however. For the four million Americans who use hearing aids, the digital signals can produce an unwanted buzzing sound. This was acknowledged by the heads of nine (9) wireless phone providers and manufacturers. Remedies are under investigation (Wall Street Journal, March 12, 1996).

The appropriate location of new radio towers to support PCS presents another challenge. Today's cellular system uses some 22,000 sites. PCS, with its lower power requirements, will require another 100,000 sites. Companies not taking the time to consider the environmental impact of such construction have run into angry community reaction ("Monster Across the Street," Wall Street Journal, July 2, 1996; "Ugly Towers Sprouting Like Toadstools in Suburbia," Time Magazine, November 4, 1996).

Another issue for wireless communications systems is privacy. The problems associated with unwanted parties listening in to conversations on first generation cellular systems (i.e. analog systems) are widely known. Digital cellular systems have the

***Digital Cellular may offer  
"too much" privacy.***

mixed blessing of potentially offering too much privacy. The privacy of digital communications is maintained by scrambling the signal during transmission. This scrambling and unscrambling is accomplished through the use of "encryption" software. These encryption codes are so powerful however that the U.S. government has a policy restricting their export. The government wants to have the ability to break these encryption codes for certain national security and crime prevention purposes. To do this, they must have some control of the encryption code development process. This government policy has been challenged by academia in the courts. In April 1996 a federal judge ruled that encryption code is covered by the First Amendments protection of free speech (Wall Street Journal, April 18, 1996). Congress has also entered the discussion, so no doubt there will be more to come on this subject downstream.

The pricing of PCS relative to cellular has also become cloudy in the last year due to the enormous sums being paid for PCS licenses. In the Fall of 1994, AT&T was saying publicly that a PCS network might be built for half the \$1000 per subscriber cost of today's cellular network (Wall Street Journal, November 7, 1994). In April 1996, analysts were pointing out that bids for the first 3 blocks of U.S. PCS licenses came to \$17 billion. That compares with an estimated \$18 to \$20 billion invested in U.S. cellular infrastructure since the launch of the service in the early 1980s. A consultant to the wireless industry assesses the situation this way: "Auctions just generate irrational behavior. We are seeing the lemming effect -- and the lemmings are now going over the cliff" (tele.com, April 1996). Some of the earliest entrants into the PCS market (a Sprint affiliate and Western Wireless) have priced their service at 20 percent to 25 percent below cellular service (Wall Street Journal, November 11, 1996). More recently, PrimeCo, a partnership of Air Touch, US West, NYNEX and Bell Atlantic, priced its PCS service roughly 5 percent below cellular (Wall Street Journal, November 13, 1996).

One area where digital technology is expected to help the wireless communications is the reliability of performance. Today, industry estimates are that one million cellular phone calls "per day" get cut off (about 2 percent of total daily cellular calls). Significant improvement is anticipated from the new technology (Wall Street Journal, May 15, 1996).

***Have the "lemmings gone over the cliff" at the PCS auctions?***

### **Satellite-Telephone Systems**

What about telephone and data networks that can bypass today's land-based systems? A number are on the drawing board. These satellite ventures range in cost from \$330 million (Orbcomm Global out of Dulles, Virginia) to a \$9 billion venture backed jointly by Microsoft CEO Bill Gates and cellular-telephone pioneer Craig McCaw (Teledesic of Kirkland, Washington). These orbiting networks range in size from 12 satellites (ICO Communications owned by Hughes Electronics and European interests) to the 840 satellite system of Teledesic. In between is a \$1.1 billion, 16 satellite "Ellipso" system from Mobile Communications (Washington), a 48-satellite Globalstar system from Loral Space and Communications, and a 66 satellite, \$5 billion Iridium system backed by Motorola. Such systems are expected to be introduced during 1998, with the Teledesic network targeted for 2002. Most of these systems, including Teledesic's 840 satellite network, are aimed at high speed data transmission.

Motorola's Iridium system plans to carry both voice and video. It will require ground stations in at least 11 countries. The satellites will use 14 million lines of computer code for navigation and call switching in the skies. The ground stations with which it will work require another 3.5 million lines of communications software. The initial cost of a call is expected to be \$3 per minute.

All of these ventures are high risk, both in terms of technical challenge and customer demand. Some analysts are concerned that with the rapid spread of land-based wireless systems, wireless

satellite ventures of any sort may have problems capturing a big enough market to make money. If all the high altitude projects came to fruition in the next four to six years, they would cost \$25 billion to \$30 billion according to industry estimates (Wall Street Journal, September 16, 1996; December 16, 1996, February 12, 1997; February 19, 1997).

***A \$9 billion, 840 satellite system targeted for 2002.***

### **The "All-Digital" Telephone Network**

The introduction of the Integrated Services Digital Network -- or ISDN -- by the telephone industry, makes available to the public for the first time a global end-to-end all digital network. The computer industry and the Internet community were among the first outside the telephone business to recognize the potential of ISDN. A key drawback to wide national acceptance of this new capability continues to be price. As the accompanying table from a recent trade magazine shows, there is considerable disparity across the country in the pricing of ISDN.

<b>ISDN PRICES</b>					
<b>BASIC RATE INTERFACE (BRI)</b>					
	<b>BUSINESS</b>	<b>RESIDENCE</b>	<b>USAGE</b>	<b>OPTIONS</b>	
				<b>TYPE</b>	<b>PRICE</b>
AMERITECH	\$33-\$37	\$33-\$37	Varies by State	Flat Rate	\$ 90.50 <sup>1</sup>
BELL ATLANTIC	\$31-\$50 \$120	\$23.50	\$0.01-\$0.02  per minute	20 Hrs. per channel Unlimited	\$ 31 500 Hrs. \$249
BELLSOUTH	\$99.50-\$101	\$53-\$72 \$26 (TN)	No Charge No Charge		
NYNEX	\$36-\$90	\$24-\$60	\$.18-\$.38 for 5 minutes 2 Channel Call		
PACIFIC TELESIS (CA)	\$24-\$26	\$24.50	\$.03-\$.15 (1st minute) \$.01-\$.13 (additional) Waived for night Residential		
PACIFIC TELESIS (NV)	\$80	\$80	No Charge		
SOUTH WESTERN BELL (AK, KS, MO)			\$.02-\$.04 per minute	10 Hrs. 80 Hrs.	\$46-\$57 \$64-\$75

US WEST	\$35-\$84	\$35-\$84	\$.02-\$.07 per minute	40 Hrs.
\$50 <sup>2</sup>				
			200 Hrs.	\$68-\$84 <sup>3</sup>

<sup>1</sup> *Indiana Only*

<sup>2</sup> *Washington Only*

<sup>3</sup> *All except AZ, CO, SD, UT*

**Source:** *Windows Magazine, January 1997*

Responding to a perception that ISDN is “overpriced” some companies are offering better priced alternatives. In its simplest version, ISDN offers 3 digital channels which can run over an existing copper telephone line. Called the Basic Rate Interface - or BRI - two of these channels operate at 64,000 bits per second (bearer or B channels) while the third channel runs at 16,000 bits per second (a delta or D channel). In the past, these digital transmission rates were significantly better than what could be found in state-of-the art modems. During the first half of 1997, both Rockwell International and U.S. Robotics will be shipping modems that operate at 56,000 bits per second. These devices, which are expected to be priced below \$200, are aimed at a market estimated to be more than \$5 billion per year.

Because these two modems use different technology, they will only be compatible at transmission rates of 33,600 bits per second and lower. Nevertheless, they are viewed as an attractive alternative to ISDN by some users. “If I can go out, buy a new modem for \$200, pay nothing extra to the phone company or my Internet provider and still connect (at a higher speed), I’m going to be very happy,” was the comment of the president of an IBM Computer Users Group (Wall Street Journal, February 11, 1997).

MFS Communications has also announced its intention to compete directly with ISDN for Internet access. Their new “Digital Subscriber Line” will, like ISDN, use the exiting copper wires owned by the regional Bell companies. They will simply terminate these loops on their own equipment located in the switching offices of the local telephone companies, and offer 112,000 bits per second service. MFS already operates their own equipment out of local network facilities owned by Bell companies in 45 cities. They will price their service below the ISDN rates offered by Bell (Wall Street Journal, December 10, 1996).

### **Internet Traffic and the Telephone Network**

“All circuits are busy. Please hang up and try your call again later.” Recorded messages such as these, or fast busy signals, have been encountered to a higher than normal extent in recent months by people simply trying to make a phone call. Unlike normal busy signals which can be received when the party being called is on the line with someone else, these “network” busy signals indicate that a portion of the network is operating at full capacity. Since telephone networks are designed to keep these overload situations to a minimum, even during the busiest hour of the busiest day, something unusual is looked for when an inordinate number of network busy signals are encountered. With its spectacular growth in recent years, and longer call duration, a prime suspect has been Internet traffic. Since Internet traffic is expected to continue to grow significantly, what needs to be done to ensure that telephone service does not deteriorate to unacceptable levels?

*“All circuits are busy.  
Please hang up and try  
your call again later.”*



A telephone conversation has significantly different characteristics than a call between a personal computer and a data base (i.e. an Internet call). While the telephone network can, (and does) carry Internet traffic, it is not the most efficient way of handling the “bursty” nature of such traffic. Telephone calls require a dedicated path to be set up through the network which stays dedicated for the duration of the call. Internet traffic is normally not continuous. Internet users spend time reading their screens and thinking as well as sending and receiving information. There is no need for a dedicated path through the network to be sitting there idle during these reading and thinking periods. Other Internet users could be using the path. Indeed, this is why data networks (so called packet switched networks) are designed differently than voice networks. Users can share transport facilities across the network. The Internet itself is a packet switched network. Getting onto the Internet (i.e. Internet Access) is where today’s problems exist. A dedicated path through a telephone switching office is normally used to connect a user to a local Internet Access provider. In a “flat rate” local calling area, the call is considered “free” by the user (i.e. It’s included in the cost normally paid for telephone service). This would be fine if Internet calls ran three to five minutes like telephone calls average. It is not unusual for Internet connections to be up for hours, however. This in turn ties up a path through the switch for that period. As the number of Internet users grows in an area, the demand on the local switching office is affected, and capacity is exhausted more rapidly. What can be done?

No one understands the issues associated with the transport of voice and data better than the telephone industry. Packet switched data networks, separate and distinct from the traditional telephone network, have been around for years. Many businesses have and are using these data network offerings to meet their needs. When ISDN was originally introduced, it was anticipated that the access line to the network would be carrying both voice and data. The plan was to differentiate voice calls from data calls and route them at the local telephone office to the appropriate “telephone company owned” network. The surprise was that a “research” network, launched by the Defense Department over 25 years ago, would gain such widespread acceptance. Internet had become the “de facto” network of choice for the public for data communications.

### **The Arrival of Internet**

The Internet is a bit of an oddity. It has no owner, is managed by volunteers, and derives operating costs from its members. It also created a perception that using it was “free”! This perception of “free” transport of data gave the telephone companies an almost impossible challenge when it came to marketing their own data networking services. Consumers were simply dialing a local telephone number to connect their personal computer to the Internet. What could be simpler? Rather than offering alternative data networking services, the competition has shifted to the offering of Internet access. And that brings us back to the “All circuits are busy” problem.

The telephone industry is now trying to deal with the impact of Internet’s arrival. Adding capacity to the traditional telephone network solves the near term congestion

problem. A better long term solution is to provide a path to the Internet that does not tie up the local telephone switch. This requires intercepting and rerouting the data traffic before it hits the telephone switch. Products have come on the market which allow this.

MCI has recently introduced a service which allows business customers to use single access lines for voice and Internet data without tying up the telephone network. Using a software system called VAULT, the data traffic is split off and sent over its high speed data network, while the phone call enters the traditional telephone networks (Wall Street Journal, January 30, 1997).

Southwestern Bell has also introduced a new "Internet/Intranet Transport Service" which is intended to reduce Internet related congestion. It uses a solution developed by NORTEL (Northern Telecom) which recognizes data calls based on the called number. It redirects the call away from the local telephone switch before it reaches the voice network. The data calls are formatted appropriately for transport over a packet switched network, and sent over such a network to the Internet Service Provider. NORTEL calls their offering "Internet Thurway for Public Carriers." The service is offered by Southwestern Bell in Texas, Missouri, Kansas, Oklahoma, and Arkansas. (NORTEL News Release, August 27, 1996) (Telecommunications Reports, January 20, 1997). Lucent Technologies System 2000 switch has a similar capability and is also used by Southwestern Bell.

### **BellSouth Plans**

BellSouth has been examining the Internet issue for some time, and has a number of options under consideration. The data they have seen to date indicates that existing telephone switches are able to currently deal with the Internet traffic load. They have seen little impact on the average holding time (i.e. call duration time) of calls processed by the local switch from all sources including Internet. Internet calls may have longer holding times than voice calls, but there are fewer of them.

Since Internet traffic is destined for Internet Access Providers, it will be concentrated as it travels across the network to the telephone office serving those providers (i.e. the Internet customers of a specific Internet Access Provider may all be dialing the same telephone number to obtain service). Between the switch and the telephone lines serving individual customers is a device called a line concentrator. It is typical to have one connection to the switch shared by eight customer lines. These line concentrators often terminate 512 customer lines which share 64 voice connections to the switch. BellSouth actively manages these concentrators to balance the load (i.e. mix high traffic and low traffic lines). While load balancing has successfully served the current traffic destined for Internet Access Providers, BellSouth is working on a number of new service offerings for IAP's, one of which would eliminate this 8:1 concentration. (So called "trunk side" switch connections). They are also working with switch vendors on technical approaches to remove Internet traffic from the voice network should the need arise. The Internet related problems encountered by BellSouth in Middle Tennessee to

date have all been related to interoffice trunk capacity. Fortunately, the availability of already deployed but unused fiber connections made it possible to expand this capacity rapidly. These interoffice trunk connections will also become more efficient for Internet traffic when they are connected to switches designed for data (i.e. packet switches).

### **Video and Voice on the Internet**

If Internet traffic can flow over the telephone network, why not the other way around -- telephone calls and video on the Internet? Why not, indeed.

Packet switched networks are capable of carrying voice and data. When conventional modems are used for access to such a network (i.e. 28,800 bits per second or less) the quality of the voice and video is poor. More digital capacity (i.e. bandwidth) is required for high quality audio and video. ISDN, cable modems and other technologies are however overcoming the access bottleneck. Other problems remain, however.

Earlier, some of the reasons for the differences between voice and data networks were discussed. When data networks are used to carry conversations or moving pictures, it may be necessary to reserve network bandwidth between two points to obtain satisfactory performance. New Internet protocols, such as RSVP, have been developed to do just this. The fact remains however that Internet was not engineered to support high volumes of voice and video calls. The switching infrastructure will likely have to be modernized, and billing and pricing systems aimed at supporting reserved bandwidth applications will need to be investigated (Telephony, April 22, 1996)

These issues notwithstanding, a move is on to make voice and video conferencing on the Internet a reality. In early 1996, Microsoft and Intel said they would promote a series of technical standards to make Internet an easier medium to use for such applications. The lack of long distance charges for Internet traffic has proved a powerful inducement (Wall Street Journal, March 12, 1996).

***Since no one owns  
the Internet,  
no one is in charge  
of upgrading it.***

This ability to use the Internet for telephone conversations received the attention of a trade group representing about 130 long-distance carriers. The America's Carriers Telecommunications Association petitioned the FCC to study how to regulate this new form of voice communication. It is noteworthy however that MCI, Sprint and AT&T, which are members of the ACTA, elected not to participate in the petition to the FCC (Telephony, March 18, 1996).

In the Fall of 1996, Netscape announced that it would incorporate Internet-telephone software into its future versions of browsers and servers. The telephone software to be used was developed by a Lucent Technologies software startup affiliate

called Elemedia. Unlike earlier versions of Internet telephone software, Elemedia's version allows callers to converse without having to wait while the other speaker talks. A video-conferencing version was to be available by the end of 1996. Some analysts have projected that Internet could siphon as much as 5 percent of the long distance business by the year 2000 (Wall Street Journal, October 30, 1996).

In another move in this area, Intel and Microsoft announced that they are introducing standardized video phones for use on the Internet. Each company introduced separate versions of the video phone based on a H. 323 standard adopted by a wide range of companies. Again, the cost of the video call may be cheap, but so is the picture quality (Wall Street Journal, December 9, 1996).

Earlier, the term "mixed blessing" was used in describing the ability of digital communications to provide too much privacy during transport. The same term may apply to certain characteristics of the Internet. Since nobody owns the Internet, and users cover their own operating costs, worldwide transport of data is quite inexpensive. The other side of the coin is that since nobody owns the Internet, nobody is in charge of upgrading it to better support voice and video applications. With a worldwide telephone network in place which is much better able to transport voice and video, it will probably take many years before the Internet is used to any significant extent for such applications.

### **The Current Situation**

Technology exists today which would allow telephone companies to transport Internet traffic directly to Internet Access Providers without tying up the telephone network. So far, this has not been necessary. When and whether this will be necessary remains to be seen. Events like the overload situation

***The problem is not  
What to do -- but -- Who  
pays for it?***

in Middle Tennessee, have caused BellSouth to significantly increase their traffic monitoring, (from weekly to hourly) and to work with Internet Access Providers to find economic ways of dealing with the growing traffic demand. From this examination, we conclude that BellSouth has an array of steps open to it for insuring the integrity of the telephone network in the presence of Internet traffic. Downstream, the issues will not be so much on what can be done, but how the changes will be paid for. The public debate has already begun on this.

## **IX. TECHNICAL COMPATIBILITY BETWEEN PROVIDERS**

Since new facility based providers of local telephone service procure their hardware and software from many of the same vendors supplying incumbent telephone

companies, technical compatibility between providers may not at first glance appear as complex as it indeed is. There are a number of reasons for this complexity.

The Federal Act requires incumbent telephone companies to allow new local companies to interconnect at any technically feasible point in the network. Many of these will be “first time” interconnection points because there was no need for them when a single network was serving a community. An array of so-called “unbundled network elements” have thus been defined which incumbent companies must learn how to provision and test in a timely manner.

A portion of everyone’s telephone number contains digits which identify a specific telephone office which must be used to complete a call. This can no longer be true when competing networks are available for call completion unless the customer is willing to change numbers when they change carriers. Since many customers are not willing to change their number, for competition to emerge, a way must be found to make the number portable. Interim ways have been identified to do this, but at some sacrifice in quality of service. A permanent solution to remedy this is under development.

During negotiations between the parties, and in arbitration proceedings conducted by the TRA, an extensive list of technical compatibility issues were addressed. They included methods for routing of specific calls under certain conditions, to measuring the quality of service being provided by incumbents to competitive companies. Of special concern was the development of a set of electronic interfaces to be used by newcomers for timely access to a wide spectrum of support systems. Such systems are used for ordering service, reporting troubles and maintaining customers accounts among other things. Speedy, reliable access to these operational, administrative and maintenance systems are essential to meeting the expectations of today’s telephone user.

While steps have been taken on many fronts to achieve technical compatibility between providers, there is a long way to go. Cooperation between competitors is not a normal state of affairs. Even when the law requires it, it does not come easy. Without getting into the motives of the parties, it must be recognized that many of the things that must be done to achieve the orderly and efficient integration and operation of technical systems owned by competing companies, have not been required in the past. There is a significant learning process for all the parties. This learning must also be done in an environment of deep suspicion. When things go wrong, is it an honest mistake in making a new process work, or is there something more sinister going on?

***Cooperation between competitors is not a normal state of affairs. Even when the law require it, it does not come easy.***

Significant progress was made during 1996 and 1997 in getting the appropriate words into interconnection agreements in order to achieve technical compatibility. The requirements of the Federal Act, the interconnection rules of the FCC, and compulsory

arbitration by State Regulatory bodies (e.g. - the TRA) have all contributed to this process. The difficulty, not surprisingly, has come in implementing the words.

Technical compatibility between providers is best judged by evidence of how well it is working. The evidence in Tennessee to date has been quite thin. Although the AUTHORITY has granted certificates to 20 companies over the past two years to build facilities which will compete with those of existing telephone companies, only one (NEXTLINK) has been in business long enough to provide some evidence of how things are going. (A second company, MCI, began offering facilities-based service to businesses in Memphis on April 16, 1997). NEXTLINK began offering facilities-based local telephone services to businesses in Memphis and Nashville on July 4, 1996. They support several hundred business lines in each city.

*Technical compatibility between providers is best judged by evidence of how well it working. The evidence in Tennessee to date has been quite thin.*

In February 1997, as part of a TRA staff investigation of a related issue, NEXTLINK described a number of difficulties they were having in implementing the terms of their interconnection agreement with BellSouth. They acknowledged that BellSouth was working on the problems, but NEXTLINK was unhappy at the pace.

Similar comments were received from other companies (e.g. - ACSI and Intermedia) based on their experience with BellSouth in other states. On February 10, 1997, AT&T began processing live orders in Georgia. One of their stated objectives is to see if the arrangements made with BellSouth can support mass market entry. AT&T is not expected to initiate local telephone service in Tennessee until their trials in Georgia and perhaps Florida are concluded.

As of the date of this report, the technical compatibility required between providers has been well defined. Nine (9) interconnection agreements between BellSouth and new local service providers have been signed by the parties and approved by the TRA. Implementation of the terms of these agreements has begun with two companies in Tennessee, but the pace has been slow and there have been problems. More evidence is needed before a judgment can be made on whether successful technical compatibility between providers has been achieved.

## **X. SERVICE PERFORMANCE OF TELECOMMUNICATIONS PROVIDERS**

This section will primarily focus on the quality of service provided by local telephone companies. Additional service performance analysis will also be conducted on long distance telephone companies and the only competing local telecommunications company operating in Tennessee.

As described earlier in the report, very little competition has emerged for local telephone service in Tennessee since the enactment of the Tennessee Telecommunications Act of 1995. BellSouth still maintains a “de facto” monopoly presence in the local telecommunications market with only minor evidence of any competition. Due to this fact, this section will not be able to provide much data regarding the quality of service performance of competing telecommunications providers. The bulk of this section will deal with service performance of the three largest existing telecommunications providers in Tennessee.

### **Quality of Service Performance Standards**

The Tennessee Regulatory Authority has Administrative Rules regarding the minimum standard for service which local telephone companies are required to provide. Local telephone companies submit quarterly reports to the TRA indicating whether they are meeting the quality of service standard. Below is a description of some of the major service standards for local telephone companies.

- **Installation of Service:** Requires that a certain percentage (85 percent) of service requests be completed within five working days.
- **Utility Commitment Date:** Requires the utility to meet 90 percent of its customer commitments to provide service by a date certain.
- **Customer Trouble Report:** Requires the utility to not exceed a certain percentage of service trouble reports per 100 stations.
- **Call Completion:** Requires completion of 97 percent of local dialed telephone calls.
- **Directory Assistance Call Completion:** Requires 85 percent of D.A. calls answered within 10 seconds.

Since enactment of the 1995 Telecommunications Act, the three (3) largest telephone companies in Tennessee have petitioned the Authority to change from the traditional rate of return regulation to price regulation. The three (3) companies are BellSouth, United Telephone Southeast, and Citizens Telephone Company of Tennessee. Since these three (3) companies provide service to approximately ninety-five (95) percent of all Tennessee access lines, the analysis of local telephone service performance will focus primarily on these three companies. It is also the territory of these three (3) companies that local competition will likely emerge. Going forward, it will be vital for the TRA to monitor service performance of these companies to ensure that the level of service in certain areas--mainly rural exchanges where competition will be slow to emerge--does not deteriorate.

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### ***United Telephone Southeast***

United had no trouble meeting the Authority's performance standards. A total of 852 service performance observations (months x exchanges by category) were reviewed for both 1995 and 1996. United only failed to meet the TRA service performance objectives during 4 of these observations in each of the two years. Therefore, United met the TRA service performance objective standard 99.5 percent of the time during 1995 and 1996. The 1995 and 1996 data reflects a level trend in Sprint United's service performance measurements.

### ***Citizens Telephone Company***

Citizens also did not have trouble meeting the TRA's service quality standards during 1995 and 1996. A total of 732 observations were reviewed in order to verify Citizens' compliance with TRA service performance standards. Citizens failed to meet the TRA service standard during 11 observations during 1995. Therefore, Citizens met the TRA service performance objective standard 98.5 percent of the time during 1995. Citizens adherence to TRA service standards improved during 1996 with 100 percent compliance.

### ***BellSouth***

BellSouth's compliance with TRA service performance was also satisfactory during 1995 and 1996. An average of 5,580 observations were evaluated for 1995 and 1996. BellSouth failed to meet the TRA service performance objective 137 times in 1995 and 158 times in 1996. The bulk of BellSouth service performance misses occurred within the installation of service within five (5) working days category. Our analysis also

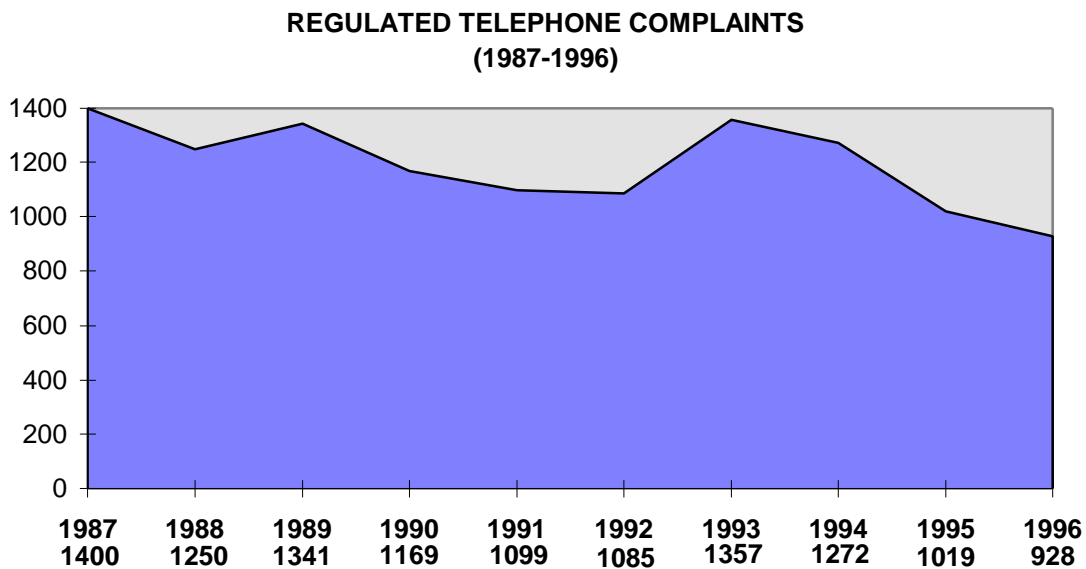


revealed the overwhelming majority of misses in this category occurred in non urban areas of Tennessee.

In summary, BellSouth met the TRA service performance standard objectives 97.6 percent of the time during 1995 and 97.2 percent of the time during 1996, reflecting a slight downward trend.

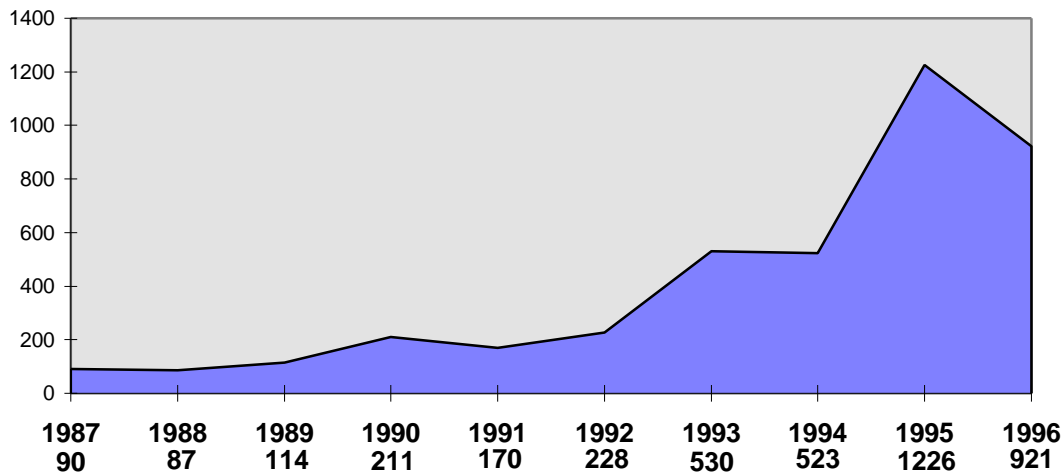
### **Macro Analysis of Consumer Complaint Data on Telephone Service**

The TRA also keeps historical data regarding consumer complaints per utility. Consumer complaints permit the TRA the opportunity to monitor the actual performance of utilities. The overall 10 year trend in consumer complaints against local telephone companies is down. Below is a description of the trend over the last 10 years.



However, the trend in complaints against long distance telephone companies has not shown a similar pattern. Since 1987, the trend in consumer complaints against long distance telecommunications companies has been upward as indicated on the chart below.

### LONG DISTANCE TELEPHONE COMPLAINTS: (1987-1996)



### Micro Analysis of Consumer Complaints

The TRA also performs micro analysis into the type of complaints registered against utilities in order to discover whether trends develop within a particular aspect of utility service. For example, the largest category of long distance complaints over the past several years has to do with billing issues. The largest portion of billing complaints registered against long distance companies had to do with consumers being billed for calls within their county. T.C.A. § 65-21-114 requires calls within counties to be toll-free. The TRA is attempting to enforce this statute.

*The largest portion of billing complaints registered against long distance companies had to do with consumers being billed for calls within their county.*

The second largest number of consumer complaints against long distance telephone companies have to do with the unauthorized switching of a consumer's long distance service. This practice, referred to as "slamming," is a growing problem and has resulted in the TRA adopting administrative rules dealing with this problem. These rules give the TRA the ability to fine companies for slamming consumers.

The largest number of consumer complaints regarding local telephone service has to do with quality of service. Fifty-one percent of all local telephone service complaints received by the TRA are related to quality of service. The largest subcategory in this type of complaint has to do with delayed installation of service orders. During 1995 and 1996 the TRA received 164 and 158 consumer complaints, respectively, regarding failure of the local telephone companies to install service when promised.

One area of local telephone service which may require special attention in the future has to do with network blockages. Network blockages refer to telephone calls that cannot be completed due to network difficulties and are indicated by a fast busy signal when attempting to make telephone calls. Beginning on November 18, 1996, BellSouth began witnessing a higher than normal level of network call blockages in certain Nashville central offices. BellSouth records indicate an upward trend developed in early November 1996 in the percentage of local calls being blocked from several Nashville central offices. The highest level of network blockage occurred in the Nashville Main office on January 6, 1997 from 3:00 p.m. to 4:00 p.m. During this period of time, almost one in every three call attempts from this office was blocked due to network capacity problems.

A TRA investigation determined that the network problems were unique to the Nashville area, and there appeared to be a number of factors which contributed to the network difficulties. The major causes of the network problems were: 1) inclement weather which caused an increase in telephone calls between Nashville and its surrounding areas; 2) school closings due to the inclement weather which further increased the call traffic between central offices; 3) the addition of two Internet Access Providers ("IAP") served out of the Nashville main central office; 4) a liberalization of pricing policies by a specific IAP which allowed for unlimited on-line access for a flat-rate price; and 5) BellSouth internal process weaknesses which delayed access to reliable data on network performance and future network demands.

BellSouth took immediate steps to correct the network blockage problems in the Nashville area by adding additional interoffice trunks. They are also working on long-term solutions to prevent similar problems from occurring. Due to this network problem, the TRA has stepped up its network evaluation efforts and is working more closely with BellSouth to identify new strategies for transporting data traffic (Internet) over the telephone network. As the computer and telephone network converge even more in the future, telephone network reliability becomes even more important to the economic well-being of our state.

*As the computer and telephone network converge even more in the future, telephone network reliability becomes even more important to the economic well-being of our state.*

### **Service Performance of Tennessee's Operational Competing Telecommunications Providers**

On July 4, 1996, NEXTLINK opened its doors as a local telephone company in Nashville and Memphis. As expected with an new business, NEXTLINK has experienced some early operational problems, such as a service outage for a short period of time. However, they were quick to respond to the service problems and offered

generous customer adjustments for the problem. MCI Metro began offering local telephone service in Memphis on April 16, 1997, and so their performance history is just now beginning. Both companies have targeted business customers in urban areas with no immediate plans to serve residential customers. NEXTLINK and MCI Metro remain the only alternatives to BellSouth in certain areas of Tennessee for local telephone service.

## **XI. ECONOMIC ASSISTANCE FUND**

T.C.A. § 65-5-213 charged the Authority to promulgate rules to collect \$10 million over five (5) years to fund a program designed by the Tennessee Department of Economic and Community Development to provide “loan guarantees, technical assistance and services, and consulting and education services” to small and minority-owned telecommunications businesses. The Authority met its obligation under T.C.A. § 65-5-213 by promulgating Rule 1220-4-9-.01 through .04, “Rules for Collecting Contributions for the Small and Minority Telecommunications Business Assistance Program.” This Rule Chapter became effective January 28, 1997.

The Authority has calculated the required contribution of each company to fund the program and mailed initial collection forms to the companies on May 15, 1997. The companies have until June 15, 1997 to forward their respective annual contributions to the Authority for deposit into the state treasury. A minimum of \$2 million will be collected this year for the fund. Each company’s contribution is based on 1996 gross intra-state receipts. A minimum contribution of \$100 is required of each certificated telecommunications service provider, regardless of gross receipts. The funds will be under the control of the Tennessee Department of Economic and Community Development for use in ensuring loan guarantees to qualified applicants seeking to establish business in the telecommunications field.

ECD’s Small and Minority-Owned Telecommunications Business Assistance Rules are designed “to encourage and support small and minority-owned telecommunications businesses as well as to further their development and enhance their ability to maximize business opportunities in the area of telecommunications.” Rule 0500-5-1-.02(1). The loan guarantees are available to businesses whose primary purpose is to provide directly, or to facilitate or enhance the provision of services and equipment for electronic communications including but not limited to the following services:

- Telecommunications Services Providers
- Personal Communications Systems (PCS)
- Cellular Telephone Service
- Satellite Telecommunications
- Resellers of Local and Long Distance Telephone Services
- Pay Telephones
- Published Telephone Directory Services
- Directory Assistance

- Operator Services
- Beeper/Paging Services
- Answering Services
- Sales Agents of Telecommunications Services
- Telecommunications Equipment Manufacturing or Sales
- Telecommunications Repair and Maintenance
- Telecommunications Right-of-Way Contractors
- Telecommunications Consultants
- Telecommunications Billing and Collection Services
- Internet Access Service Providers
- Electronic Bulletin Boards

The maximum loan guarantee under this program is 80 percent of the principal amount of a loan not the exceed \$400,000 per award to a qualified business. Additional information concerning this program is available through ECD.

## **XII. SMALL/MINORITY OWNED BUSINESS PLANS**

Under T.C.A. § 65-5-212, Telecommunications Services Providers are required to furnish the Authority with plans to procure goods and services from small and minority owned businesses as a prerequisite to certification. The providers are also required to submit any information on existing programs designed to furnish technical assistance to small and minority businesses. ILECs were required to file such plans as well. The Act also requires Telecommunications Services Providers to file annual updates on their Small and Minority-Owned Business Plans. The Authority is in the process of requesting these updates. These updates will include a survey of the Plans and will ask such questions as how many contracts they have with small and minority owned telecommunications businesses to purchase goods and services. These updates will also allow the Authority the opportunity to evaluate the effectiveness of the Plans. An evaluation of the Plans will be included in the next Authority report to the General Assembly on this subject.

The Act defines a small and minority business as “a business which is solely owned, or at least fifty-one percent (51 percent) of the assets or outstanding stock of which is owned, by an individual who personally manages and controls the daily operation of such business, and who is impeded from normal entry into the economic mainstream because of race, religion, sex, or national origin, and such businesses has annual gross receipts of less than four million dollars (\$4,000,000).”

The Authority has included the specificity, effects, and efforts of such plans in its overall considerations of applications for certification as a competing telecommunications service provider. The Authority has also reviewed plans submitted by the various ILECs.

The TRA has certificated 20 carriers in the two years since passage of the Tennessee Telecommunications Act of 1995. Only three of these companies are providing local telecommunications services to businesses in competition with BellSouth. BellSouth has no competitor for local residential service. This lack of direct competition has led to a negligible impact on small and minority owned businesses seeking to provide services, equipment and technical support to new telecommunications concerns.

## APPENDICES

**1997 REPORT TO THE LEGISLATURE  
FOR THE YEARS 1995 AND 1996  
1995 DATA**

Line No.	CUSTOMERS					ACCESS LINES		REVENUES					Internet Providers
	Residential	Local Business	Residential	Long Distance Business	Business	Residential	Business	Residential	Local Business	Residential	Long Distance Business	Business	
Incumbent LECs													
1	BelSouth	1,704,682	223,177	N/A	N/A	1,736,777	673,016	373,000,000	402,800,000	60,200,000	35,600,000	225	F/
2	UTSE	167,532	21,284	N/A	N/A	163,331	57,976	30,157,799	28,970,783	5,618,320	2,492,324	19	
3	Citizens	A/ 65,426	19,589	N/A	N/A	65,426	19,589	8,234,201	9,181,008	14,988,532	8,808,662	20	
4	TDS	B/ 59,837	16,589	N/A	N/A	59,837	16,589	8,536,457	5,690,972	5,698,325	1,242,071	0	G/
5	TEC	C/ 10,660	2,169	N/A	N/A	10,607	1,854	1,083,009	400,656	83,156	36,434	2	
6	Century	D/ 18,161	4,353	N/A	N/A	18,161	4,353	3,722,919	1,923,272	2,781,266	815,534	7	
7	Admore	2,050	200	N/A	N/A	2,071	297	304,044	41,461	155,001	21,136	4	
8	Loretto	4,637	600	N/A	N/A	4,637	691	733,101	189,440	1,195,715	702,245	2	
9	United	8,985	988	N/A	N/A	8,985	988	1,566,472	172,251	4,120,869	453,135	3	
10	Millington	17,573	4,450	N/A	N/A	17,932	4,684	2,746,617	3,368,239	4,798,937	1,252,878	4	
11	Sub Total	2,059,563	293,399	0	0	2,087,764	786,037	430,084,619	452,578,082	99,600,321	51,374,619	286	
MCs													
12		0	0	0	0	1,749,439	825,985	0	0	84,347,340	194,432,450	80	
Competing LECs													
13	AT&T	E/ 0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0
14	MCI	E/ 0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0
15	ATS of Tennessee	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0
16	Southeast Telephone	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0
17	Time Warner	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0
18	Metro Fiber	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0
19	MCIn	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0
20	Netlink	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0
21	ICG	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0
22	ACSI	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	1
23	Winstar Wireless	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0
24	Hyperion of Tennessee			N/A	N/A	N/A	N/A						
25	Brooks Fiber			N/A	N/A	N/A	N/A						
26	Sub Total	0	0	0	0	0	0	0	0	0	0	0	1
27	Grand Total	2,059,563	293,399	0	0	3,837,203	1,606,022	430,084,619	452,578,082	183,947,661	245,807,069	387	

A/ Citizens of Tennessee and the Volunteer State.  
B/ Tennessee, Concord, Tellico and Humphreys County.  
C/ Crockett, Peoples and West Tennessee.  
D/ Adamsville, Claiborne and Ochsleash-Collegedale.  
E/ Offers long distance through a certified LDC, those amounts reported above.  
F/ Bell states this is the total for all of Tennessee.  
G/ TDS states it has no estimate so zero is included.

N/A = Not applicable

NOTE: INDIVIDUAL COMPANY INFORMATION CONSIDERED PROPRIETARY BY ICL.

**1997 REPORT TO THE LEGISLATURE  
FOR THE YEARS 1995 AND 1996  
1996 DATA**

Line No.		CUSTOMERS					ACCESS LINES		REVENUES					Internet Providers
		Residential	Local Business	Residential	Long Distance Business	Business	Residential	Business	Residential	Local Business	Residential	Long Distance Business	Business	
Incumbent LECs														
1	BelSouth	1,735,375	228,294	N/A	N/A	1,790,129	725,571	413,600,000	447,900,000	59,400,000	35,000,000	225	G/	
2	UTSE	171,584	21,573	N/A	N/A	168,331	65,000	33,866,774	31,823,219	5,708,365	2,594,354	19		
3	Citizens	A/ 67,986	21,392	N/A	N/A	67,986	21,392	11,041,318	11,227,150	21,158,662	12,246,514	20		
4	TDS	B/ 63,660	17,768	N/A	N/A	63,660	17,768	9,507,155	6,336,103	6,988,213	1,336,437	0	H/	
5	TEC	C/ 10,794	2,079	N/A	N/A	10,793	2,060	1,302,786	522,420	144,594	44,520	2		
6	Century	D/ 18,791	4,716	N/A	N/A	18,791	4,716	3,791,455	2,418,371	3,149,488	723,160	7		
7	Admore	2,100	210	N/A	N/A	2,152	300	346,368	47,641	165,678	22,592	4		
8	Loretto	4,709	676	N/A	N/A	4,709	800	744,036	208,421	1,317,281	775,641	2		
9	United	9,383	1,160	N/A	N/A	9,383	1,160	1,723,081	213,020	4,461,078	551,513	3		
10	Millington	17,760	4,709	N/A	N/A	17,960	5,019	2,920,560	3,719,974	4,603,718	1,207,732	4		
11	Sub Total	2,102,162	302,636	0	0	2,153,894	843,678	478,729,533	504,477,319	106,147,077	54,502,473	286		
MCs														
12		0	0	0	0	1,592,392	760,365	0	0	96,190,878	208,190,633	99		
Competing LECs														
13	AT&T	E/ 0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0	
14	Sprint	E/ 0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0	
15	MCI	E/ 0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0	
16	DeltaCom	F/ 0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0	
17	Comm Depot	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0	
18	ATS of Tennessee	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0	
19	Southeast Telephone	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0	
20	Time Warner	0	1	N/A	N/A	N/A	N/A	0	6,000	0	0	0	3	
21	Servpro Fiber	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0	
22	MCIn	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0	
23	LCI International	F/ 0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0	
24	Netlink	0	63	N/A	N/A	N/A	N/A	0	60,000	0	0	0	0	
25	ICG	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0	
26	ACSI	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	1	
27	Winstar Wireless	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0	
28	Intermedia	F/ 0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0	
29	Hyperion of Tennessee			N/A	N/A	N/A	N/A							
30	LDOS	0	0	N/A	N/A	N/A	N/A	0	0	0	0	0	0	
31	Brooks Fiber			N/A	N/A	N/A	N/A							
32	Citizens Telecomm	0	0	0	0	0	0	0	0	0	0	0	0	
33	Sub Total	0	64	0	0	0	0	0	66,000	0	0	0	0	
34	Grand Total	2,102,162	302,700	0	0	3,746,286	1,604,243	478,729,533	504,483,319	202,337,955	263,693,106	393		

A/ Citizens of Tennessee and the Volunteer State.  
B/ Tennessee, Concord, Tellico and Humphreys County.  
C/ Crockett, Peoples and West Tennessee.  
D/ Adamsville, Claiborne and Ochsleash-Collegedale.  
E/ Offers long distance through a certified LDC, those amounts reported above.  
F/ Offers long distance service as a reseller only.  
G/ Bell states this is the total for all of Tennessee.  
H/ TDS states it has no estimate so zero is included.

N/A = Not applicable

NOTE: INDIVIDUAL COMPANY INFORMATION CONSIDERED PROPRIETARY BY ICL.



**Tennessee Resellers****1996** Total Intrastate Gross Receipts per Form UD-1

3/9/99

Company	TN Intrastate Gross Receipts	Less: Uncollectibles	TN Intrastate Gross Receipts as Reported on Line 1 of Form UD-16
1 360 Communications Company	2,214	7	2,207
2 A.B.T.S. International Corp.	5	0	5
3 ACC National Long Distance Corp.	955	0	955
4 Access Network Services, Inc.	37,523	0	37,523
5 Access Point, Inc.	14	0	14
6 Advanced Telecommunication Network, Inc. ("Advanced")	115,675	308	115,675
7 Alternative Long Distance, Inc. d/b/a Money Savers	140,242	4,207	136,034
8 Ameri-Net Services Corp.			0
9 America's Tele-Network Corp.			0
10 American Business Alliance, Inc.			0
11 American Express Telecom, Inc.	4,408	0	4,408
12 American International Telephone, Inc.			0
13 American Network Exchange, Inc. ("AMNEX")	308,278	43,159	265,119
14 American Tel Group, Inc.	34,282	0	34,282
15 American Telco, Inc.	7,052	0	7,052
16 American Telecommunications Enterprise, Inc.			0
17 American Teltronics Long Distance, Inc.			0
18 Americom Technologies, Inc.	39,251	3,418	35,833
19 AmeriConnect	20,465	0	20,465
20 Ameritech Communications International, Inc.			0
21 AmeriVision Communications, Inc.	481,494	0	481,494
22 Anchor Communications Corporation			0
23 Annox, Inc.			0
24 Apollo Communication Services, LLC			0
25 ATCALL, Inc.			0
26 Athena International, Inc.			0
27 Atlas Communications, Inc.	14,896	0	14,896
28 ATN Communications, Inc.			0
29 ATS Network Communications, Inc.			0
30 Automated Communications, Inc. d/b/a AC America, Inc.	7,976	0	7,976
31 Bell Atlantic Communications, Inc.	2,638	0	2,638
32 Ben Lomand Communications, Inc.	961,124	7,461	953,663
33 BLT Technologies, Inc.	129,446	0	129,446
34 Budget Call Long Distance, Inc.	0	0	0
35 Business Discount Plan, Inc.	281,691	0	281,691
36 Business Options, Inc.			0
37 Business Telecom, Inc.	1,227,980	28,366	1,199,614
38 C-Net Communications	0	0	0
39 Cable & Wireless, Inc.	2,066,978	25,736	2,041,242
40 Capital Long Distance (Capital Network Systems, Inc.)	0	0	0
41 Caribbean Telephone & Telegraph, Inc.			0
42 Central Payphone Services, Inc.			0
43 Century Telecommunications, Inc.	3,997	0	3,997
44 CFW Communications Services, Inc.	93	0	93
45 Cherry Communications, Inc. ("CCI")	22,324	0	22,324
46 Cincinnati Bell Long Distance, Inc.	343,605	4,123	339,482
47 Citizens Telecomm. Co., dba Citizens Long Distance Co. & Citizens Telecom	897,372	30,612	866,760
48 Cleartel Communications	0	0	0
49 Coast International, Inc.			0
50 Coastal Telecom Limited Liability Company	15,694	0	15,694
51 Colorado River Communications Corp.	61	0	61
52 Comdata Telecommunications Services			0
53 Common Concerns, Inc.	0	0	0
54 Commonwealth Long Distance Company ("CLD")	1,680	0	1,680
55 Communicall, Inc.			0
56 Communications Telesystems International	12,603	0	12,603
57 Communications Brokerage Services, Inc.			0
58 CommuniGroup of Jackson, Inc.	1,303,868	10,683	1,293,185
59 Computer Telephone Corp.			0
60 Connect America Communications, Inc.	8,241	921	7,320
61 ConQuest Operator Services Corp.	224,707	10,429	214,278
62 Corporate Services Telecom, Inc.			0
63 Corporate Telemanagement Group, Inc.	494,166	6,177	487,989

64 CTN Telephone Network, Inc.		0	0	0
65 Cypress Telecommunications Corp.		37,537	0	37,537
66 D.D.D. Calling, Inc.		0	0	0
67 DeltaCom, Inc.		278,712	0	278,712
68 DeltaTel, Inc.				0
69 Dial & Save of Tennessee, Inc.	A/ *	726,927	36,927	726,927
70 Discount Network Services, Inc.		28,242	0	28,242
71 Discounted Long Distance, Inc.		973,996	20,774	953,222
72 Eastern Telecommunications, Inc.		62,491	0	62,490
73 Easton Telecom Services, Inc.		12,154	0	12,154
74 Econophone, Inc.				0
75 Electric Lightwave, Inc.		0	0	0
76 EqualNet Corporation				0
77 Excel Telecommunications, Inc.	*	5,008,045	0	5,008,045
78 Fairchild Communications Services Co.				0
79 Federal Transtel, Inc		0	0	0
80 First National Service Corp. (FNSC)		0	0	0
81 Five Star Telecom, Inc.		0	0	0
82 Florida Network, U.S.A., Inc.		1,387,549	0	1,387,549
83 Frontier Communications International, Inc.		65,147	4,964	60,183
84 GE Capital Communications Services, Inc.	*	339,053	0	339,053
85 Georgia Public Telephone Company				0
86 Gillette Global Network, Inc.				0
87 Global Tel*Link Corp.				0
88 Global TeleMedia				0
89 Group Long Distance, Inc.		15,884	0	15,884
90 GTE Card Services, Inc.				0
91 GTN Corp.				0
92 Gulf Long Distance, Inc.		11,425	0	11,425
93 Heartline Communications, Inc. ("HCI")		0	0	0
94 Hertz Technologies, Inc.		57,583	0	57,583
95 Hi-Rim Communications, Inc.				0
96 HLC Internet, Inc.				0
97 Home Owners Long Distance, Inc.		6,129	0	6,129
98 Host Network, Inc.				0
99 IdealDial Corp.		0	0	0
100 Inacom Communications, Inc.		41,831	0	41,831
101 Info-Tel, Inc.		7,325	7,786	(461)
102 Innovative Telecom Corp.				0
103 Insurance Specialists Group, Inc. d/b/a/ Global Page Communications Company		311	0	311
104 Intellicall Operator Services, Inc. (IOS)		70,122	0	70,122
105 Intellicom International Corp.				0
106 Inter-Tel NetSolutions, Inc.		645	0	645
107 Intercontinental Communications Group, Inc.				0
108 Interlink Telecommunications, Inc.		36,307	0	36,307
109 International Telecommunications Corp.		0	0	0
110 IXC Long Distance, Inc.		59,534	0	59,534
111 J D Services, Inc.		9,097	436	8,661
112 Key Communication Management				0
113 L.D. Services, Inc.				0
114 LCI International Telecom, Corp.		5,651,568	70,645	5,580,923
115 LCI Telemanagement Corp.		494,166	9,883	484,283
116 LDC Telecommunications, Inc.		7,082	212	6,870
117 LDD, Inc.		8,908	445	8,462
118 LDM Systems, Inc.		65,264	0	65,264
119 Least Cost Routing, Inc. (Santa Ana, CA)		22,819	2,217	20,602
120 Least Cost Routing, Inc. (Clearwater, FL)		88	0	88
121 Long Distance Direct Holdings, Inc.		14,661	0	14,661
122 Long Distance International, Inc.		35,660	818	34,842
123 Long Distance Management		21,183	0	21,183
124 Long Distance of Michigan, Inc.		1,227	0	1,227
125 Long Distance Wholesale Club	A/	716,871	24,159	716,871
126 Lyrihn Communications, Inc.				0
127 Matrix Telecom, Inc.		136,160	4,534	131,626
128 Maxima Communications Corp.		392	0	392
129 MIDCOM Communications Inc.		258,062	0	258,062
130 Midwest Fibernet (Consolidated Communications Telecom Services)		2,277	0	2,277
131 MTC Telmanagement Corp.		4,162	0	4,162
132 MVC Network, Inc.				0
133 National Accounts, Inc.		63,633	2,545	61,088
134 National Communications Association, Inc.				0
135 National Telephone Communications, Inc.		75,170	4,891	70,279

136 NeTel, Inc.			0
137 Network America, Inc.		11,174	1,940
138 Network Long Distance, Inc.		18,185	546
139 Network Operator Services, Inc.	A/	4,815	722
140 Network Plus, Inc.		100,545	1,508
141 Norlight, Inc.		0	0
142 Norstan Network Services, Inc.		13,469	0
143 North American Communications of Tennessee, Inc.		121,758	35,310
144 North American InTeleCom, Inc.		0	0
145 NOSVA, Limited Partnership			0
146 One 2 One Communications, Inc.			0
147 One Star Long Distance, Inc.		0	0
148 Operator Communications, Inc.			0
149 Operator Service Co.		17,930	1,505
150 OpTex, Inc.		0	0
151 Overlook Communications International Corp.		17,454	0
152 Page-A-Phone, Inc.		1,440	0
153 Pantel Communications, Inc.		14,491	0
154 Pennsylvania Alternative Communications, Inc.			0
155 Phoenix Network, Inc.		57,547	0
156 Phone One, Inc. (Intermedia Communications, Inc.)		4,129	0
157 Positive Impact, Inc.			0
158 Preferred Carrier Services, Inc.	*	66	0
159 Premiere Communications, Inc.		36,937	0
160 Primus Telecommunications, Inc.			0
161 Professional Communication Management Services, Inc.		3,723	0
162 PSP Marketing Group, Inc.			0
163 QAI, Inc.			0
164 QCC, Inc.		88,451	7,648
165 Quest Telecommunications, Inc.			0
166 Qwest Communications Corporation	A/	224,295	0
167 RRV Enterprises, INC. d/b/a/ Consumer Access		70,469	0
168 Security Telecom Corporation			0
169 Shared Communications Services, Inc.		258	0
170 SmarTalk TeleServices, Inc.			0
171 SNET America, Inc.			0
172 Southeastern Network Services, LLC		443,226	0
173 Southern Communications Systems			0
174 SoutherNet, Inc.		65,643	4,004
175 Star Link Communications, Inc.			0
176 Starlink Communications, Inc.			0
177 Starlink Communications, LLC			0
178 STARTEC, Inc.		82	0
179 Strategic Alliances, Inc.		1,376	0
180 Switched Services Communications, L.L.C.		1,038,349	0
181 Target Telecom, Inc.			0
182 Tel -Save, Inc.		378,521	26,496
183 TelaLeasing Enterprises, Inc.			0
184 Telcom Network, Inc.			0
185 Tele-Sys, Inc. d/b/a Access America	*	768,705	0
186 Telecare, Inc.			0
187 Telecom America, Inc.		0	0
188 Telecom One, Incorporated		6,674	0
189 Telecommunications Company of the Americas, Inc.		12,310	0
190 Telescan, Inc.		276,462	14,068
191 Telsave Corp.			0
192 Telscape USA, Inc.			0
193 Teltrust Communications Services, Inc.			0
194 The Furst Group, Inc.		243,849	7,315
195 Thrifty Call, Inc.	A/	332,913	14,081
196 Time-Warner Communications of the Mid-South, L.P.	*	6,000	0
197 TLX Communications, Inc. (Telamerica)		1,944	0
198 TMO Communications Co.		2,310	0
199 Total National Communications d/b/a Total World Telecom		64,118	0
200 TotalTel USA Communications, Inc.		0	0
201 Touch 1 Communications, Inc.		93,033	0
202 Touch 1 Long Distance, Inc.		2,119,032	0
203 Trans National Communications, Inc.			0
204 Transcommunications, Inc.		486,039	2,204
205 TresCom U.S.A., Inc.		1,007	0
206 TTI National, Inc.		102,508	0
207 TW Communications, Inc.		22,199	666
			21,533

208 U.S. Digital Network, Limited Partnership			0
209 U.S. Long Distance, Inc.	432,483	0	432,483
210 U.S. Osiris Corporation			0
211 US South Communications, Inc.	578	0	578
212 U.S. WEST Interprise America, Inc.	0	0	0
213 UniDial Incorporated	272,714	0	272,714
214 United Wats, Inc.			0
215 US WATS, Inc.	3,580	72	3,508
216 USA Calling, Inc.			0
217 USN Communications Long Distance, Inc.	1,624	0	1,624
218 UStel			0
219 USX Consultants, Inc.	167	0	167
220 Value Tel, Inc.			0
221 Value-Added Communications, Inc.			0
222 VarTec Telecom, Inc.	1,208,559	37,949	1,170,610
223 VIP Telephone Network, Inc.	81,993	24,578	57,415
224 Voyager Networks, Inc.			0
225 WATS International Corporation			0
226 Western Union Communications, Inc.	9,876	0	9,876
227 Westinghouse Elelctric Corp.			0
228 WinStar Gateway Network, Inc.	63,049	5,560	57,489
229 Working Assets Funding Service, Inc.	102,630	2,648	99,982
230 World Telecom Group, Inc.	17,724	0	17,724
231 World Wide Communications, Inc.	1,510	0	1,510
232 WorldCom, Inc.			0
233 WorldLink Communications, Inc.			0
234 WorldTel Services, Inc.			0
235 Wright Businesses, Inc.			0
236 XLConnect Services, Inc.	0	0	0
237 Xtracom, Inc.	0	0	0
238 Zenex Long Distance, Inc.	35,037	0	35,037
<b>TOTALS</b>	<b>35,533,355.73</b>	<b>555,664.54</b>	<b>35,054,388.19</b>

A/ The Gross Receipts as Reported on Line 1 do not total because of a company error.

\* These companies' gross receipts figures may also contain some revenues from local resale.

NOTE: Blanks in the Gross Receipts columns indicate that the company had not reported its figures for 1996 to the TRA at the time this report was issued.

# 1995 CELLULAR DATA

Company Name	Combined Revenue	Subscribers
1. Advantage Cellular Systems	\$ 2,760,946	4,220
2. BellSouth Mobility, Inc.	5,087,889	2,964
3. BellSouth Personal Comm.	0	0
4. Chattanooga Cellular.Tel.Co.	21,365,968	33,340
5. Chattanooga MSA Ltd. Part..	12,729,930	22,410
6. GTE Mobilnet of Clarksville	3,725,847	5,564
7. GTE Mobilnet of Nashville	81,184,176	110,496
8. GTE Mobilnet of Tennessee	44,550,518	72,688
9. H.S. Communications, Inc.	1,510,785	2,549
10. MajorCo L.P.	0	0
11. Memphis Cellular Tel. Co.	41,237,873	54,741
12. Memphis SMSA Lim. Part.	59,627,074	94,338
13. M-T Cellular, Inc.	3,960,710	4,385
14. Nashville/Clarksville MSA Ltd	56,389,508	90,748
15. Northeast Mississippi Cellular	203,159	345
16. Sprint Cellular Co. of Tennessee	1,714,282	659
17. Telespectrum of Virginia	13,837,328	33,879
18. Tennessee 04 Partners L.P.	10,333,220	9,198
19. Tennessee RSA Ltd. Part.	2,160,687	13,070
20. Tennessee RSA No. 3 Ltd.	7,409,988	9,325
21. Tennessee RSA No. 4, Sub 2	4,264,726	2,728
22. Tennessee RSA No. 6B, Inc.	1,523,333	1,284
23. Tennessee RSA No. 8 Ltd. Part.	117,574	0
24. U. S. Cellular Telephone Co.	27,115,177	35,680
TOTAL	\$402,810,698	604,611

Source: Advalorem Reports filed by the Cellular Companies with the Comptroller of the Treasury, Division of State Assessed Properties

## 1996 CELLULAR DATA

Company Name	Combined Revenue	Subscribers
1. Advantage Cellular Systems	\$ 2,941,354	4,595
2. BellSouth Mobility, Inc.	3,295,171	4,080
3. BellSouth Personal Comm.	1,239,148	6,141
4. Chase Telecommunications	0	0
5. Chattanooga Cellular.Tel.Co.	24,874,468	42,508
6. Chattanooga MSA Ltd. Part..	14,194,648	25,478
7. GTE Mobilnet of Clarksville	4,584,836	7,993
8. GTE Mobilnet of Nashville	92,146,730	134,941
9. GTE Mobilnet of Tennessee	64,506,953	120,509
10. H.S. Communications, Inc.	1,692,502	3,086
11. Knoxville Cellular Tel. Co.	37,455,570	60,770
12. MajorCo L.P.	0	0
13. Memphis Cellular Tel. Co.	47,709,592	64,078
14. Memphis SMSA Lim. Part.	67,391,764	118,176
15. M-T Cellular, Inc.	3,665,027	6,326
16. Nashville/Clarksville MSA Ltd	72,553,646	115,897
17. Northeast Mississippi Cellular	591,783	1,154
18. Powertel Memphis, Inc.	1,448,706	10,261
19. 360° Comm. Co. of Tennessee	2,632,970	1,299
20. Telespectrum of Virginia	17,418,878	34,209
21. Tennessee 04 Partners L.P.	na	na
22. Tennessee RSA Ltd. Part.	11,411,890	15,146
23. Tennessee RSA No. 3 Ltd.	8,607,055	15,544
24. Tennessee RSA No. 4, Sub 2	6,359,574	4,679
25. Tennessee RSA No. 6B, Inc.	1,925,973	3,003
26. Tennessee RSA No. 8 Ltd. Part.	175,462	0
27. U. S. Cellular Telephone Co.	38,072,280	50,175
TOTAL	\$526,895,980	850,048

Source: Advalorem Reports filed by the Cellular Companies with the Comptroller of the Treasury, Division of State Assessed Properties

**CHRONOLOGY  
OF  
SIGNIFICANT TELECOMMUNICATIONS EVENTS RELATING TO  
THE PASSAGE OF THE TENNESSEE TELECOMMUNICATIONS ACT**

**June 6, 1995**- Tennessee Telecommunications Act of 1995 (Chapter 408 of the Public Acts of 1995) signed into law.

**June 13, 1995**- Reseller rules 1220-4-2-.57 became effective. Through April 7, 1997, approximately 270 resellers of long distance and local telecommunications services have been certificated by the Public Service Commission (PSC)/Tennessee Regulatory Authority (TRA).

**June 16, 1995**- Six pending dockets for certification as competing local exchange carriers (CLECs) were set for hearings pursuant to T.C.A. 65-4-201.

**June 19, 1995**- United Telephone-Southeast, Inc. (UTSE) filed for price regulation pursuant to T.C.A. 65-5-209 in Docket No. 95-02615

**June 20, 1995**- BellSouth Telecommunications, Inc. d/b/a South Central Bell Telephone Company (BST) file for price regulation pursuant to T.C.A. 65-5-209 in Docket No. 95-02614.

**June 29, 1995**- the PSC established a Universal Service Proceeding pursuant to T.C.A. 65-5-207 in Docket No. 95-02499.

**August 24, 1995**- the PSC issued orders granting Certificates of Convenience and Necessity (CCNs) for CLECs to the following companies:

AVR, L.P. d/b/a Hyperion of Tennessee, Inc. in Docket No. 94-00661  
ICG Access Services, Inc. (formerly Teleport Denver ) in Docket No. 93-07922  
Metropolitan Fiber Systems of Tennessee, Inc. in Docket No. 94-02564  
Time Warner AxS of Tennessee, L.P. (now Time Warner Communications of the Mid-South, L.P.) in Docket No. 93-02980

**August 30, 1995**- PSC issued a Notice of Rulemaking for Competition in the local Exchange in continued Docket 94-0184 pursuant to T.C.A. 65-4-124.

**September 7, 1995**- the PSC issued orders granting CCNs for CLECs to the following companies:

ATS of Tennessee, LLC in Docket No. 95-02763  
Brooks Fiber of Tennessee, Inc. in Docket No. 95-02764

**September 20, 1995-** the PSC issued orders in the price regulation applications of UTSE and BST as follows:

UTSE was notified that its rate of return was slightly below its authorized range and was given ten days to request that a contested case be convened to set a fair rate of return pursuant to T.C.A.65-5-209 in Docket 95-02615. UTSE declined to request said hearing.

BST was notified that its rate of return was over its authorized rate of return and scheduled a pre-hearing conference pursuant to T.C.A.65-5-209.

**September 29, 1995-** the PSC issued an order granting a CCN to Signal Communications of Tennessee, LLC (now NextLink Tennessee, LLC) to operate as a CLEC in Docket No. 95-02502.

**October 11, 1995-** the PSC issued an order granting a CCN to American Communications Services, Inc. to operate as a CLEC in Docket No. 95-02995.

**October 13, 1995 -** the PSC issued an order granting a CCN to AT&T Communications of the South Central States, Inc. to operate as a CLEC in Docket No. 95-02790.

- the PSC issued an order granting the application of UTSE for price regulation in Docket No. 95-02615.

**October 17, 1995-** the PSC issued a notice of hearing for November 1, 1995, pursuant to T.C.A.65-5-209 in the Application of BST for a Price Regulation Plan in Docket No. 95-02614.

- the PSC set a hearing in the Universal Service Proceeding for October 27, 1995 in Docket No. 95-02499.

**October 24, 1995-** the PSC issued a Pre-hearing Conference Order in the Application of BST for a Price Regulation Plan in Docket No. 95-02614

**October 25, 1995-** the PSC issued a Pre-hearing Conference Order in the Universal Service Proceeding in Docket No. 95-02499.

**October 27, 1995-** the PSC issued an order in the Petition of BST for a Declaratory Order as to the Applicability of T.C.A. 65-5-209 in Docket No. 95-03383 and consolidated its hearing with Docket No. 95-02614 for hearing on November 1, 1995.

**November 7, 1995-** the PSC scheduled further hearings for November 20, 1995 in the Application of BST for a Price Regulation Plan in Docket No. 95-02614, regarding rate reductions found appropriate by the PSC on November 7, 1995.

**November 9, 1995-** the PSC issued an order in the Petition of BST for a Declaratory Order as to the Applicability of T.C.A. 65-5-209 in Docket No. 95-03383.



**November 20, 1995**, - the PSC issued an order granting a CCN to MCImetro Access Transmission Services, Inc. to operate as a CLEC in Docket No. 93-08793.

**December 5, 1995**, - the PSC issued a further notice in the Universal Service Proceeding in Docket No. 95-02499.

- the PSC requested parties to submit proposed findings of fact and conclusions of law in the Application of BST for a Price Regulation Plan pursuant to a decision of the PSC of November 30, 1995, in Docket No. 95-02614.

**December 19, 1995**, - the PSC issued an Initial Order in the Universal Service Proceeding calling for additional data to be filed by June 30, 1996, in Docket No. 95-02499.

**December 28, 1995**, - Citizens Telecommunications Company of Tennessee, L.L.C.(CTC) filed an Application for a Price Regulation Plan, Docket No. 96-00010.

**December 29, 1995**, - the PSC promulgated rules for Local Telecommunications Service Providers in Docket No. 94-00184 and pursuant to T.C.A.65-4-124.

**January 2, 1996**- the PSC also promulgated rules for the collection of contributions to the Small and Minority Telecommunications Business Assistance Program pursuant to T.C.A. 65-5-213.

**January 5, 1996**- BellSouth filed a Petition for Review, with the Court of Appeals, of the PSC order issued on November 9, 1995 in Docket No. 95-03383 which found that the adjustments made by the Staff in its review of BellSouth's form TPSC 3.01 were correct.

**January 18, 1996**, - the PSC issued a notice in the Avoidable Cost of Providing Bundled Services for Resale by Local Exchange Telephone Companies (Avoidable Costs) setting a pre-hearing conference for January 30, 1996, in Docket No. 96-00067.

**January 23, 1996**, - the PSC issued its order in the Application of BST for a Price Regulation Plan, finding that BST could enter into price regulation pursuant to T.C.A. 65-5-209 if it first reduced rates by \$56.3 million annually in Docket No. 95-02614.

**February 7, 1996**, - the PSC issued an order memorializing its December 19, 1995, decision in the Universal Service Proceeding, finding that no alternative universal service support mechanisms needed to be established at that time and that submission of more data by the parties was required, in Docket No. 95-02499.

**February 8, 1996**- the federal Telecommunications Act of 1996 is signed into law amending the Communications Act of 1934, 47 U.S.C. Sections 151 et. seq.

**February 12, 1996**, - the PSC issued an order in re: United States Department of Agriculture Rural Utilities Service(USDARUS) Network Modernization Rules

Requirements in Docket No. 96-00143, re-affirming and clarifying the Commission's FYI telecommunications modernization plan to conform to USDARUS requirements set forth in 7 CFR 1751.

**February 14, 1996,** BellSouth appealed the January 23, 1996, order of the PSC in Docket No. 95-02614 to the Court of Appeals asking for a stay of a portion of the Commission's Order requiring a \$56.3 million reduction in rates before BellSouth could go into Price Regulation

**February 23, 1996,-** the PSC issued an order in response to a motion of BST for a stay of the proposed rate reductions in its January 23, 1996 order in Docket No. 95-02614. Before the petition could be heard on February 20, 1996, BST had filed an appeal of the PSC's January 23, 1996, order. This order stated that the PSC would file a motion asking the Court of Appeals to remand the case for the sole purpose of allowing the Commission to rule on BST's motion for stay.

**February 27, 1996,** the Court of Appeals issued an order staying the PSC's January 23, 1996, order in the BellSouth petition for a Price Regulation Plan in Docket No. 95-02614.

**February 29, 1996,-** the PSC issued a Pre-hearing Conference Order in the Avoidable Costs Docket No. 96-00067 setting for filing dates and a hearing schedule.

**March 5, 1996,-** the PSC in Docket No. 96-00447 issued an order adopting the rules for the Small and Minority Telecommunications Business Assistance Program pursuant to T.C.A.65-5-213 addressing a procedural change in promulgation of rules.

**March 8, 1996,-** the PSC issued an order in Docket Nos. 93-07922, 93-08793 and 94-00661 interpreting two issues concerning the Tennessee Telecommunications Act. The Commission ruled that CLECs did not have to reapply to serve territory of a small incumbent local exchange carrier(ILEC) if the small ILEC took one of two actions to open itself to competition and that the Commission could condition approval of governmental franchises for CLECs to exclude territory served by a small ILEC.

- the Federal Communications Commission(FCC) issued an order in CC Docket No. 96-45 establishing a Joint Board on Universal Service consisting of three FCC commissioners and four state commissioners pursuant to the federal Telecommunications Act of 1996.

**March 13, 1996,-** the PSC Staff issued a report that the earnings of CTC were within the authorized rate of return range in Docket No. 96-00010.

**April 3, 1996,-** the Court of Appeals issued an order clarifying that its February 27, 1996, order not only stayed the \$56.3 million rate reduction ordered by the PSC but also BellSouth's Price Regulation Plan in PSC Docket No. 95-02614.

**April 12, 1996**, - the PSC issued an order granting CTC's Application for a Price Regulation Plan in Docket No 96-00010.

**May 3, 1996**, - the PSC issued an order setting a hearing in the Avoidable Costs Docket 96-00067 for May 29, 1996.

**May 10, 1996**, - Chairman Keith Bissell retires from the Commission.

**May 15, 1996**, - Commissioner Melvin J. Malone is sworn in to succeed former Commissioner Keith Bissell.

**May 17, 1996**, - the PSC in Docket 94-00184 resubmitted proposed rules for Local Telecommunications Service Providers, having made necessary changes to the proposed rules submitted to the Attorney General on December 29, 1995, to conform to the federal Telecommunications Act of 1996.

**May 20, 1996**, - at the request of parties, the PSC set a hearing for May 24, 1996, to consider delaying the Avoidable Costs Proceeding due to the pendency of a rulemaking before the Federal Communications Commission pursuant to the federal Telecommunications Act of 1996, and its possible effects on the PSC proceeding.

**May 30, 1996**, - the PSC issued orders granting CCNs to the following companies to operate as CLECs:

Worldcom, Inc. d/b/a LDDS Worldcom in Docket No. 96-00780

LCI International Telecom Corp. in Docket No. 96-00783

**June 7, 1996**, - due to an informal Opinion of the Attorney General issued on May 31, 1996, the PSC issued an order canceling the hearing in the Avoidable Costs Proceeding, reset for June 12, 1996, stating that the hearing in this matter would have to be set by the Tennessee Regulatory Authority.

**June 27, 1996**, - the PSC issued an order granting a CCN to Citizens Telecommunications Company to operate as a CLEC in Docket No. 96-00779

**June 28, 1996** - the PSC issued orders approving Interconnection Agreements, pursuant to Sections 251 and 252 of the federal Telecommunications Act of 1996, between BellSouth Telecommunications, Inc. and the following CLECs:

Time Warner AxS of Tennessee, L.P. in Docket No. 96-01013

NextLink Tennessee, L.L.C. in Docket No. 96-01018

MCImetro Access Transmission Services Inc. in Docket No. 96-01006

- the PSC issued an order granting a CCN to Comm Depot, Inc. to operate as a CLEC in Docket No. 96-00922.

**June 28, 1996,-** the Public Service Commission issued an order of Final Disposition of All Business Pending on June 30, 1996, and ceased to exist on June 30, 1996.

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**July 1, 1996,-** the Tennessee Regulatory Authority(TRA) was created. H. Lynn Greer, Jr., Sara P. Kyle, and Melvin J. Malone were sworn in as Directors of the TRA.

**July 3,1996** BST filed a petition for approval of a resell agreement with Southeast Telephone in Docket No. 96-01125.

**July 17, 1996,-** AT&T Communications of the South Central States, Inc.(AT&T) filed a petition for arbitration of an Inter-connection Agreement, pursuant to Sections 251 and 252 of the federal Telecommunications Act of 1996, between BellSouth and AT&T in Docket No. 96-001152.

- BST filed five Interconnection Agreements, pursuant to Sections 251 and 252 of the federal Telecommunications Act of 1996, for approval in Docket Nos. 96-01161-1165.

**July 18, 1996.-** the TRA issued Administrative Order No. 1 concerning the commencement of proceedings before the TRA that were pending before the PSC on June 30, 1996.

**August 1, 1996,-** the FCC adopted a voluminous order in CC Docket No. 96-98 (released August 8, 1996) setting forth findings and rules for local telecommunications competition, inter-connection agreements, calculation of rates, and many other subjects required by the federal Telecommunications Act of 1996.

**August 6, 1996,-** Brooks Fiber Communications of Tennessee, Inc. filed a petition for arbitration of an Inter-connection Agreement with BST, pursuant to Sections 251 and 252 of the federal Telecommunications Act of 1996 in Docket No. 96-01223.

**August 7, 1996,-** the TRA issued Administrative Order No. 2 recommending various proceedings that had been established by motion of the PSC including the Universal Service Proceeding in Docket No. 95-02499 and the Avoidable Costs Proceeding in Docket No. 96-00067.

**August 9, 1996,-** UTSE filed a petition for authority to provide inter-LATA inter-exchange telephone service in Docket 96-01235

**August 13, 1996,-** American Communications Services, Inc. filed a petition for arbitration of an Inter-connection Agreement with BST pursuant to Sections 251 and 252 of the federal Telecommunications Act of 1996, in Docket No. 96-01249

**August 16, 1996,-** MCI Telecommunications Corporation filed a petition for arbitration of an Inter-connection Agreement with BST in Docket No. 96-01271 and a motion for consolidation with Docket No. 96-01152, petition of AT&T for arbitration of an Inter-connection Agreement with BST.

**August 23, 1996,** American Communications Services, Inc. filed a motion to consolidate its petition for arbitration, Docket No. 96-01249, with that of AT&T in Docket No. 96-01152.

**August 29, 1996,-** BST filed a petition for approval of an Inter-connection Agreement with American Communications Services, Inc. pursuant to the federal Telecommunications Act of 1996 in Docket No. 96- 01316.

**August 30, 1996,-** Brooks Fiber Communications of Tennessee, Inc. filed a motion to consolidate its petition for arbitration in Docket No. 96-01223 with that of AT&T in Docket No.. 96-01152.

**September 6, 1996,-** parties having failed to stipulate to the administrative record in the Avoidable Costs Proceeding in Docket No. 96-00067, the TRA issued an order terminating this docket and ordering a new one be established in Docket 96-01331.

**September 13, 1996,-** the TRA issued a Protective Order in the new Avoidable Costs Docket 96-01331.

**September 15, 1996,-** UTSE filed a tariff to change and increase and decrease rates for its annual Price Cap adjustment pursuant to T.C.A. 65-5-209 Docket No. 96-01423.

**September 17, 1996,-** the TRA issued an order granting a CCN to Intermedia Communications of Florida, Inc. to operate as a CLEC in Docket No. 96-0942.

**September 18, 1996,-** the TRA issued an order allowing multiple parties to intervene in the Avoidable Costs Docket 96-01331.

**September 20, 1996,-** Sprint Communications Company filed a petition for arbitration of an inter-connection agreement with BST pursuant to Section 252 of the federal Telecommunications Act of 1996, in Docket No. 96-01411.

**September 24, 1996,-** the TRA issued an agreed order setting the filing and hearing schedule for the Avoidable Costs Docket 96-01331.

**September 27, 1996,-** the TRA issued procedural rules pursuant to Section 252 of the federal Telecommunications Act of 1996 in Dockets 96-01152, 96-01271, 96-01249, and 96-01223 consolidated for arbitration.

**October 3, 1996**, - the TRA issued an order granting a CCN to Sprint Communications Company, L.P. to operate as a CLEC in Docket No. 96-01153.

**October 10, 1996**, - BST filed a petition for approval of an Inter-connection Agreement with Brooks Fiber of Tennessee, Inc. in Docket No. 96-01484.

**October 15, 1996**, - the Eighth Circuit Court of Appeals issued a stay of the pricing provisions and the “pick and choose” provisions of the FCC’s Order in CC Docket 96-98.

**October 16, 1996** the TRA issued a Notice of Arbitration Conference in the Dockets consolidated for arbitration setting the conference to begin on October 21, 1996.

**October 23, 1996**, - the TRA issued an order setting forth how the decisions in the Avoidable Costs Docket 96-01331, would be utilized in the arbitration dockets.

**October 24, 1996**, - the TRA issued an order suspending a tariff proposed by BST to limit the number of residence services lines per location to ten in Docket No. 96-01422.

**October 25, 1996**, - the TRA issued an order suspending UTSE’s proposed tariffs for an annual Price Cap adjustment in Docket No. 96-01423.

**November 4, 1996**, - the TRA issued an order and Notice of Pre-hearing Conference in BST’s proposed tariff to limit the number of residence lines per location to ten, suspending the tariff and setting the conference for November 21, 1996.

**November 7, 1996**, - the TRA issued a Notice of Status Conference for November 15, 1996, in the petition of Sprint Communications Company. L.P. for an arbitration of an Inter-connection Agreement with BST in Docket No. 96-01411.

**November 8, 1996**, - BST filed a petition for approval of an Inter-connection Agreement with Winstar Telecommunications, Inc. in Docket No. 96-01578.

- the FCC released the voluminous text of the Joint Board Recommendation of the Federal-State Commissioners on Universal Service in CC Docket 96-45 which recommended, among other things, that \$2.25 billion be funded annually to wire the nations schools, and libraries and provide discounts for telecommunications services and that the funding for this service be assessed on both intra-state and inter state revenues. The FCC must act upon the Joint Board recommendation by May 8, 1997.

**November 12, 1996**, - the TRA issued an order granting UTSE a CCN to provide InterLATA Inter-exchange Telephone Service and ordered UTSE to provide an IntraLATA toll dialing Parity Plan by November 29, 1996, for TRA review and approval in Docket No. 96- 01235.

**November 25, 1996**, - the TRA issued its First Order of Arbitration Awards in the Matter of the Inter-connection Agreement of AT&T and BST in Docket 96-01152 and the

Petition of MCI Communications Corporation for an Inter-connection Agreement with BST in Docket No. 96-01271.

**November 27, 1996,-** the Tennessee Cable Telecommunications Association(TCTA) filed a petition for investigation and audit of BST for unauthorized and unlawful construction of network facilities, cross subsidization and anti-competitive conduct in Docket No. 96-01637.

**December 5, 1996,-** the TRA issued an order and a Notice of Pre-hearing Conference for December 15, 1996, in the tariff filing by UTSE to reflect an Annual Price Cap adjustment in Docket No. 96- 01423.

- the TRA also issued a Notice of Pre-Arbitration Hearing for December 11, 1996, in the petition of Sprint Communications for an arbitration of an Inter-connection Agreement with BST in Docket No. 96- 01411.

**December 10, 1996,-** the TRA issued an agreed order terminating the Arbitration Petition of American Communication Services, Inc. and BST in Docket No. 96-01249.

**December 30, 1996,-** the TRA issued a Stipulated Protective Order in the petition of Sprint Communications Company for arbitration of an Inter-connection Agreement with BST and a Notice of Arbitration Conference for January 7, 1997, in Docket No. 96-01411.

**December 31, 1996,-** the TRA issued an order rejecting the CCN request of Paramount Wireless Communication of Tennessee, L.L.C. to operate as a CLEC, Docket No. 96-01354

**January 2, 1997,-** the TRA issued an order granting a CCN to Deltacom, Inc. to operate as a CLEC in Docket No. 96-01431.

- the TRA issued an order approving a December 9, 1996, Report and Recommendation of the Hearing Officer which recommended that the parties respond to the Motion to Clarify and that the Consumer Advocate brief his position that the tariff is a modification of the material terms and conditions of basic service (T.C.A. 65-5-208) and that the other parties file replies in Docket No. 96-01422.

**January 6, 1997,-** BellSouth filed a response refuting the allegations of the TCTA petition on November 27, 1996, in Docket No. 96-01637.

**January 17, 1997,-** the TRA issued a Final Order in the Avoidable Costs of Providing Bundled Service for Resale by Local Exchange Telephone Companies setting the discount rates for BST and UTSE in Docket No. 96-01331.

**January 23, 1997,-** the TRA issued a Second and Final Order of Arbitration Awards in the Matter of the Inter-connection Agreement Between AT&T and BST in Docket No. 96-01152 and Between MCI Telecommunications and BST in Docket No. 96-01271.

**January 28, 1997**, - the TRA issued an order on reconsideration amending its order of November 12, 1996, granting UTSE limited authority to provide interLATA inter-exchange telephone service on a dedicated non-switched basis, and allowing switched service upon approval of its intraLATA toll dialing parity plan in Docket No. 96-01235.

**January 31, 1997**, - the TRA issued a Protective Order in UTSE's tariff filing to Reflect an Annual Price Cap Adjustment in Docket No. 96-01423.

**February 14, 1997**, - the TRA issued an order from a Pre-hearing Conference in the petition of Sprint Communications Company for Arbitration of an Inter-connection Agreement with BST in Docket No. 96-01411.

**February 24, 1997**, - the TRA issued a Notice of Hearing setting forth a testimony schedule and a hearing date of March 11, 1997, in the in UTSE's tariff filing to Reflect an Annual Price Cap Adjustment in Docket No. 96-01423.

- BST and AT&T filed an Inter-connection Agreement for approval in Docket No. 97-00249 in response to the TRA order of Arbitration Awards issued on January 23, 1997 in Docket No. 96-01152.

**February 28, 1997**, - the TRA issued an order approving the Initial Order of the Hearing Officer in UTSE's tariff filing to Reflect an Annual Price Cap Adjustment in Docket No. 96-01423.

**March 3, 1997**, - Citizens Telecommunications of Tennessee, L.L.C. and Citizens Telecommunications of the Volunteer State, L.L.C. filed a joint petition for approval of an intra-lata equal access implementation plan pursuant to Section 51.213(a) of the rules of the FCC in Docket No. 97-00275.

**March 6, 1997**, - the TRA issued a Notice of Public Hearing for March 18, 1997, of the request for approval of an Inter-connection Agreement between AT&T and BST pursuant to Section 252 of the federal Telecommunications Act of 1996 in Docket No. 97-00249.

- the TRA issued an order setting a pre-hearing conference to determine the issues, establish a discovery schedule, and set a hearing date on the issues of cost recovery of an IntraLATA Toll Dialing Parity Plan in UTSE's application for a CCN to provide interLATA inter-exchange telephone service in Docket No. 96-01235.

**March 7, 1997**, - the TRA issued a Final Order of Arbitration Awards in the petition of MCI Telecommunications for Arbitration of an Inter-connection Agreement with BST in Docket No. 96-01271.

**March 10, 1997**, - the TRA issued an order in the petition of BST for approval of an Inter-connection Agreement with American Communications Services, Inc., in Docket No. 96-01316.



**March 21, 1997,-** the TRA issued an order and Notice of Status Conference Instituting Formal Inquiry and Adopting Procedure in BST's Entry into Long Distance (InterLATA) Service in Tennessee pursuant to Section 271 of the federal Telecommunications Act of 1996.

**March 26, 1997,-** the TRA issued a Final Order of Arbitration Awards in the petition of Sprint Communications Company for an arbitration of an Inter-connection Agreement with BST in Docket No. 96-01411.

**April 4, 1997,-** the TRA issued an order granting a CCN to GTE Card Services, Inc. d/b/a GTE Long Distance to operate as a CLEC in Docket No. 97-00103.

- the TRA issued orders in Docket Nos. 97-00344 and 97-00345 conditionally approving revisions to payphone service tariffs filed by UTSE pursuant to an FCC Order 96-439.

**April 7, 1997,-** the TRA issued an order approving an Inter-connection Agreement negotiated between BST and Winstar Telecommunications, Inc. pursuant to Sections 251 and 252 of the federal Telecommunications Act of 1996 in Docket No. 96-01578.

- the TRA issued an order in Docket No. 97-00346 conditionally approving revisions to BST payphone service tariffs filed by BST pursuant to FCC Order 96-439.

- BST filed for approval of an Inter-connection Agreement between MCI Communications Corporation and BST pursuant to Section 252 of the federal Telecommunications Act of 1996 in Docket No. 97-00445 and in response to the TRA's order in Docket No. 96-01271 issued on March 7, 1997.

**April 10, 1997,-** the TRA issued a Notice of Hearing for Approval of an Inter-connection Agreement between MCI Communications Corporation and BST in Docket No. 97-00445.

**April 15, 1997,-** the TRA approved a revised IntraLATA Toll Dialing Parity Plan in UTSE's application for a CCN to provide interLATA inter-exchange telephone service in Docket No. 96-01235.

-AT&T filed a petition in Docket No 97-0888 asking the TRA to close out its Universal Service Docket No. 95-02499 and create a new docket as the data in the prior docket would be stale.

- contemporaneously with the filing of the request for a new Universal Service proceeding, AT&T filed a request for a generic contested case for the purpose of access charge reform in Docket No. 97-0889

- on April 22, 1997, Citizens Telecommunications of the Volunteer State, L.L.C. and Citizens Telecommunications of the Tennessee, L.L.C. filed a joint petition for the establishment of alternative universal service support mechanisms

**April 24, 1997,-** the TRA issued an order approving a resale agreement between BST and SouthEast Telephone, LP pursuant to sections 251 and 252 of the federal Telecommunications Act of 1996 in Docket No. 96-01125.

**April 29, 1997,-** the TRA issued order approving interconnection agreements pursuant to Sections 251 and 252 of the federal Telecommunications Act of 1996 between BST and Intermedia Communications Corporation in Docket No. 96-01161; BST and Brooks Fiber Communications in Docket No. 96-01484; and BST and AT&T in Docket No. 97-00249.

**May 1, 1997,-** the TRA issued an order ruling on procedural motions the application of UTSE to reflect an annual price cap adjustment in Docket No. 96-01423.

**May 2, 1997,-** the TRA issued an order conditionally approving revised pay telephone tariffs for various telephone companies pursuant to FCC order 96-439 and establishing a proceeding and allowing interventions to review the reasonableness of the tariffs in Docket 97-00409.